



Utah Water Assessment & Conditions Monitoring (Drought Webinar)

The meeting will begin shortly



Thank you to our contributors

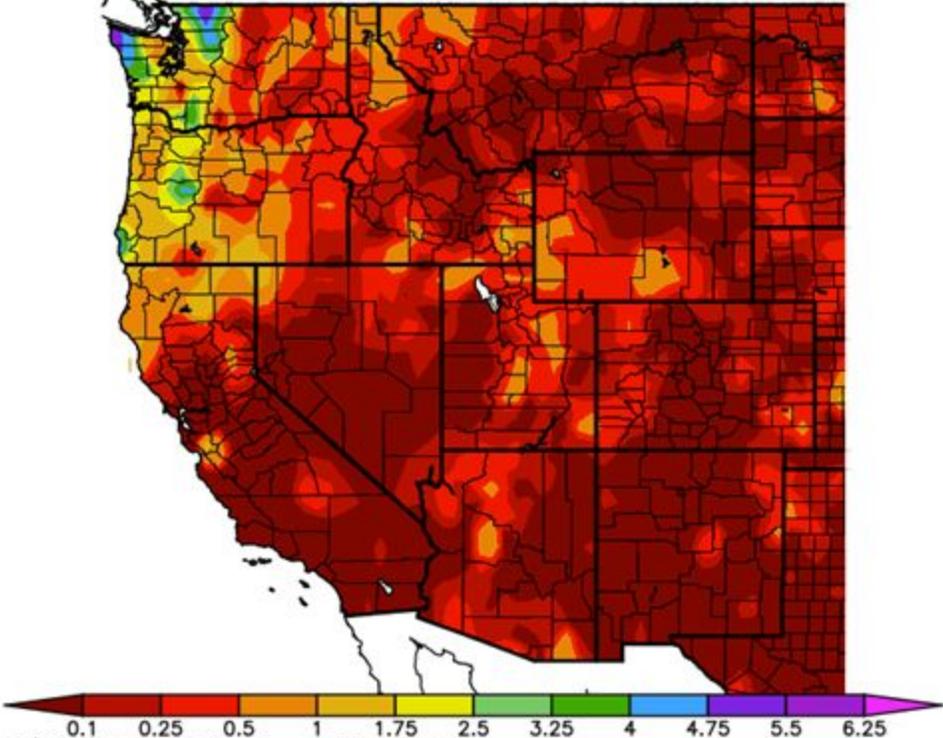


Utah Water Assessment & Conditions Monitoring Webinar

September 20, 2021

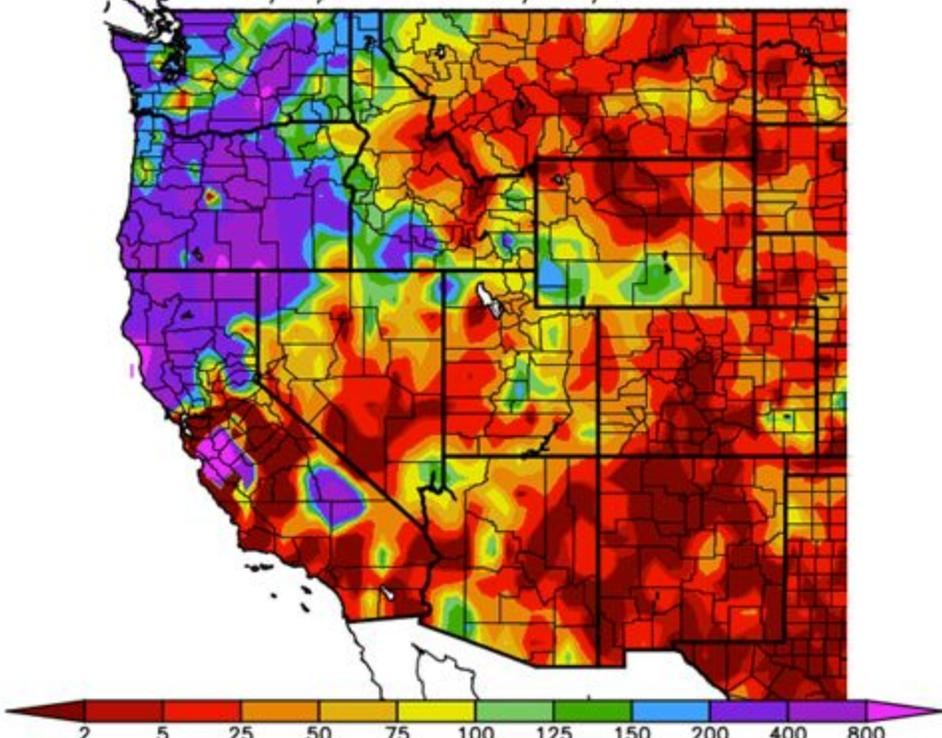
Precipitation 14 day history

Total Precipitation (in.)
9/6/2021 - 9/19/2021



Generated 9/20/2021 at WRCC using provisional data.
NOAA Regional Climate Centers

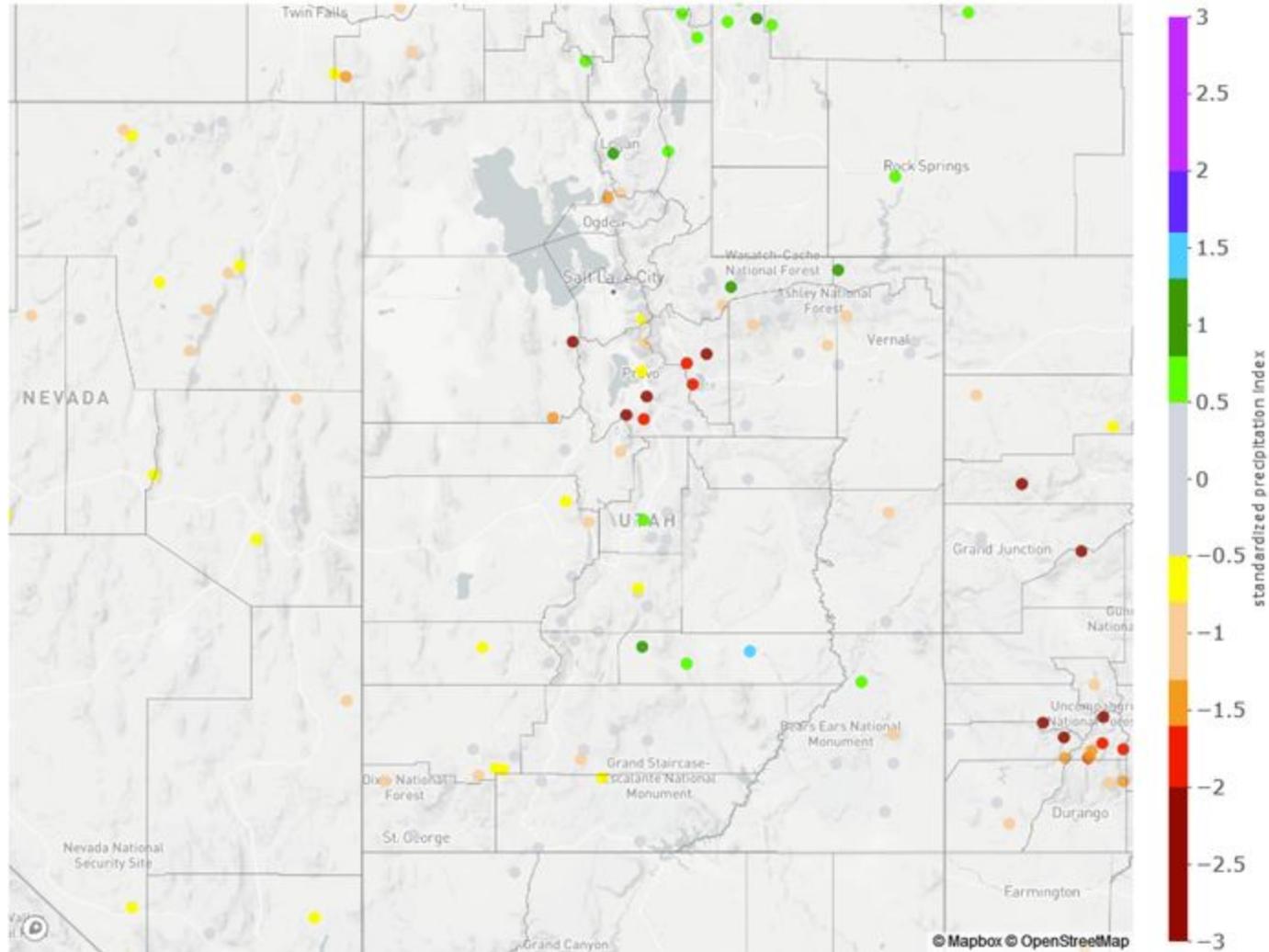
Percent of Average Precipitation (%)
9/6/2021 - 9/19/2021



Generated 9/20/2021 at WRCC using provisional data.
NOAA Regional Climate Centers

30-day Standardized Precipitation Index (SPI)

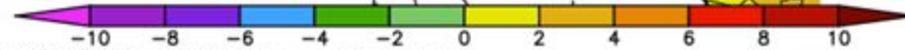
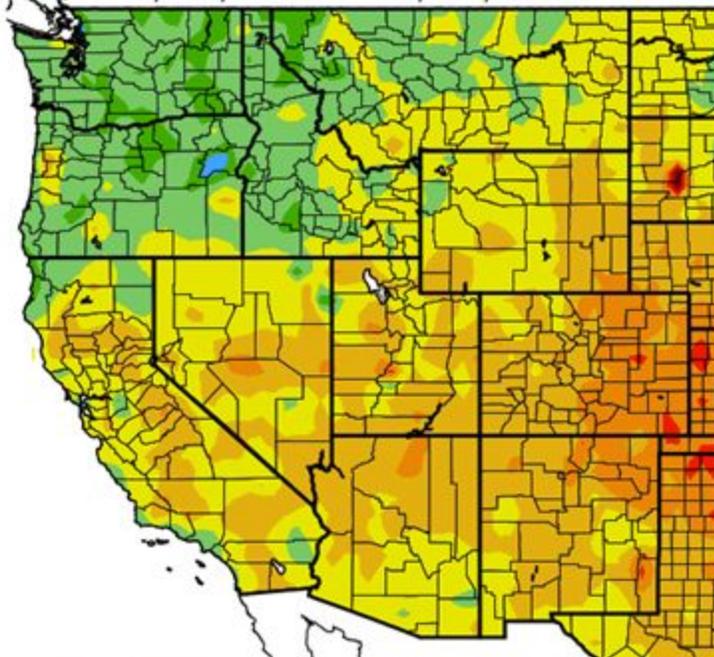
30-day Standardized Precipitation Index: 2021/08/20 - 2021/09/18



Agency - Utah Climate Center
Presenter - Jon Meyer

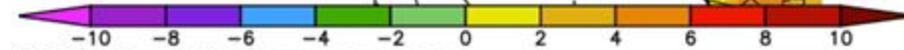
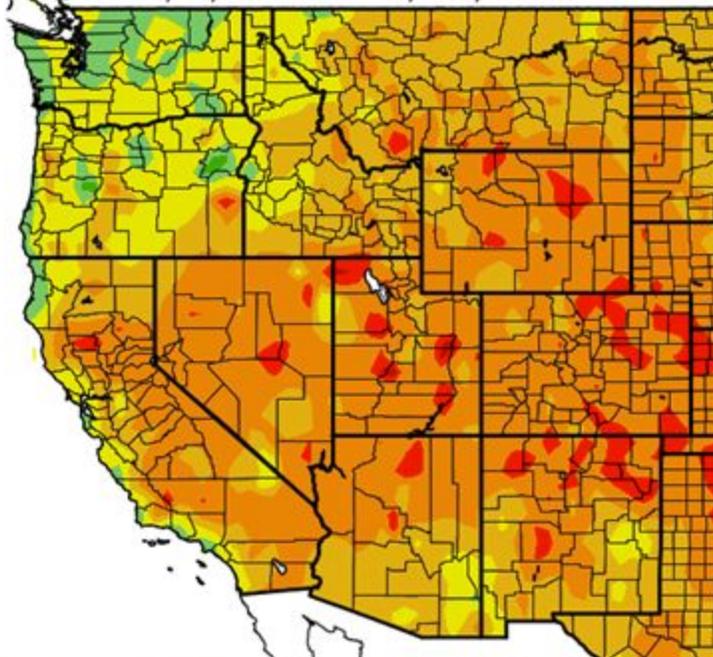
30-day & 14-day Temperature departure from average

Ave. Temperature dep from Ave (deg F)
8/21/2021 - 9/19/2021



Generated 9/20/2021 at WRCC using provisional data.
NOAA Regional Climate Centers

Ave. Temperature dep from Ave (deg F)
9/6/2021 - 9/19/2021



Generated 9/20/2021 at WRCC using provisional data.
NOAA Regional Climate Centers

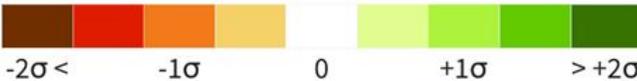
Evaporative conditions

U.S. Vegetation and Drought

[Evaporative Stress Index](#) [VegDRI](#) [Vegetation Health Index](#)

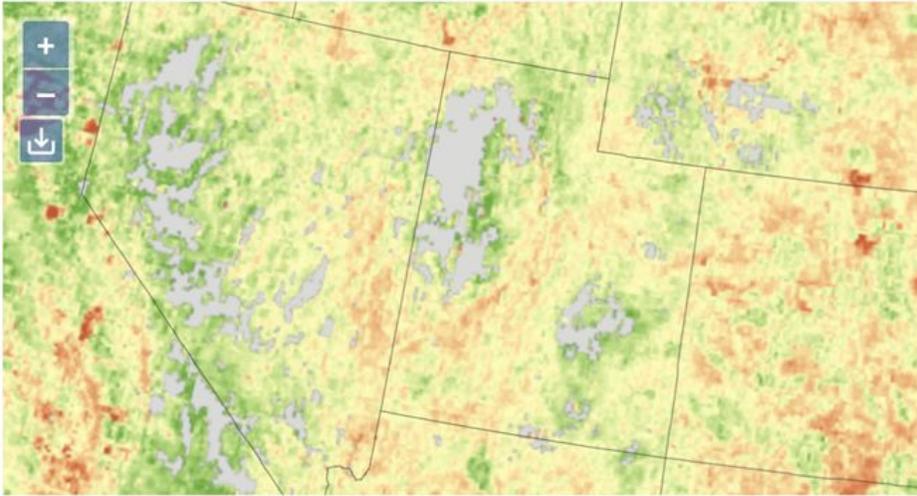
The Evaporative Stress Index (ESI) describes temporal anomalies in evapotranspiration (ET), highlighting areas with anomalously high or low rates of water use across the land surface. The ESI also demonstrates capability for capturing early signals of "flash drought," brought on by extended periods of hot, dry, and windy conditions leading to rapid soil moisture depletion. [Learn more.](#)

Standardized ET/PET Anomalies



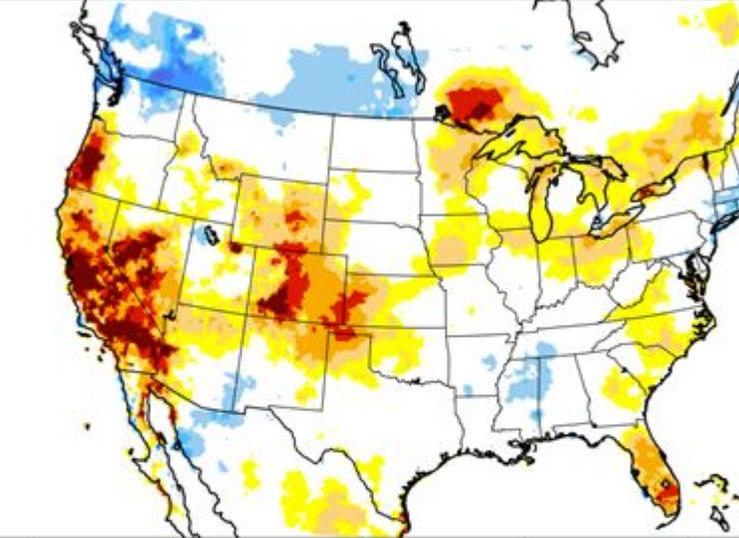
*Currently, data are only available for the contiguous U.S.

Source(s): [NASA SERVIR](#)

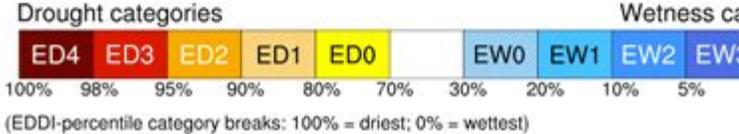


Last Updated - 09/21/21

1-month EDDI categories for September 15, 2021



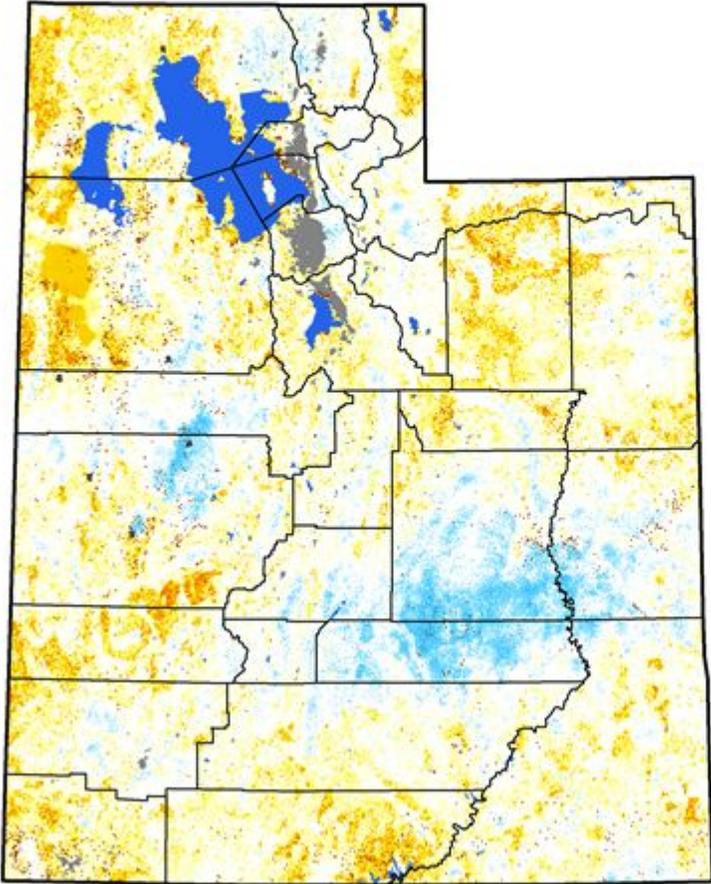
120°W 110°W 100°W 90°W 80°W



Quick Drought Response Index (QuickDRI)

Quick Drought Response Index Utah

September 19, 2021
(Week 38)

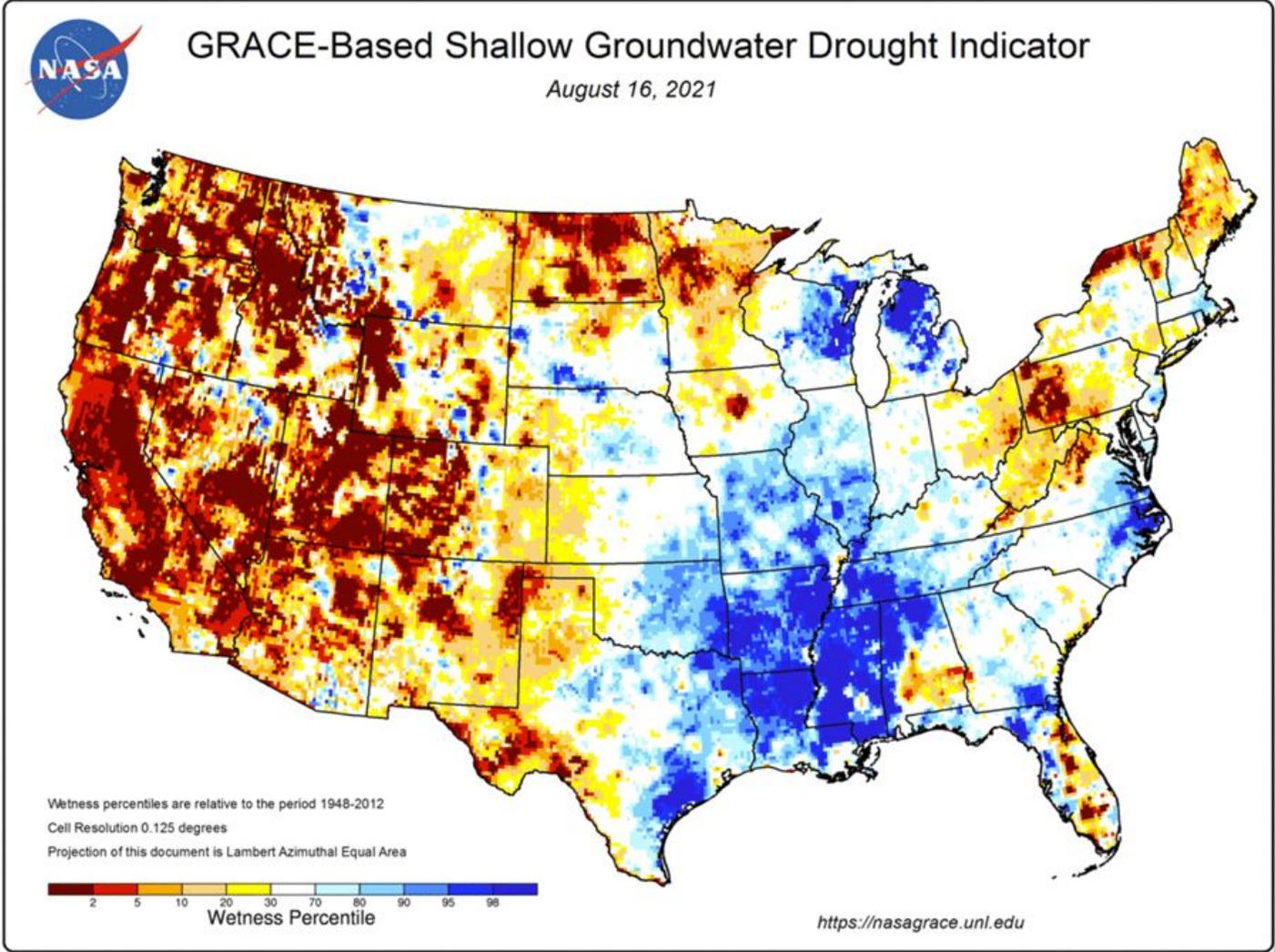


Conditions Relative to
4-Week Historical Average

- Wetter
- Near Average
- Drier
- Out of Season
- Urban
- No Data
- Water



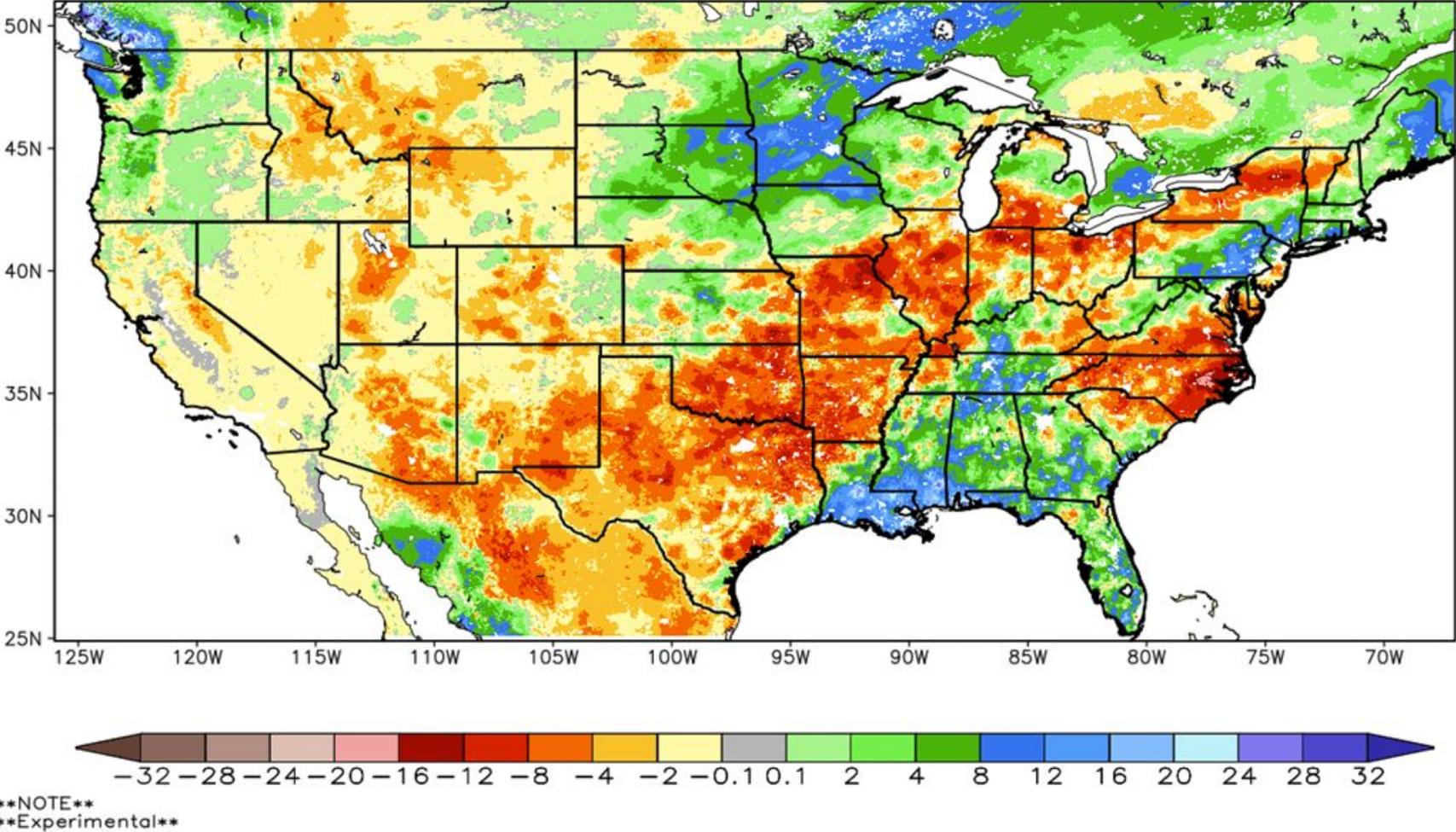
1-Month GRACE Soil moisture comparison



Agency - Utah Climate Center
Presenter - Jon Meyer

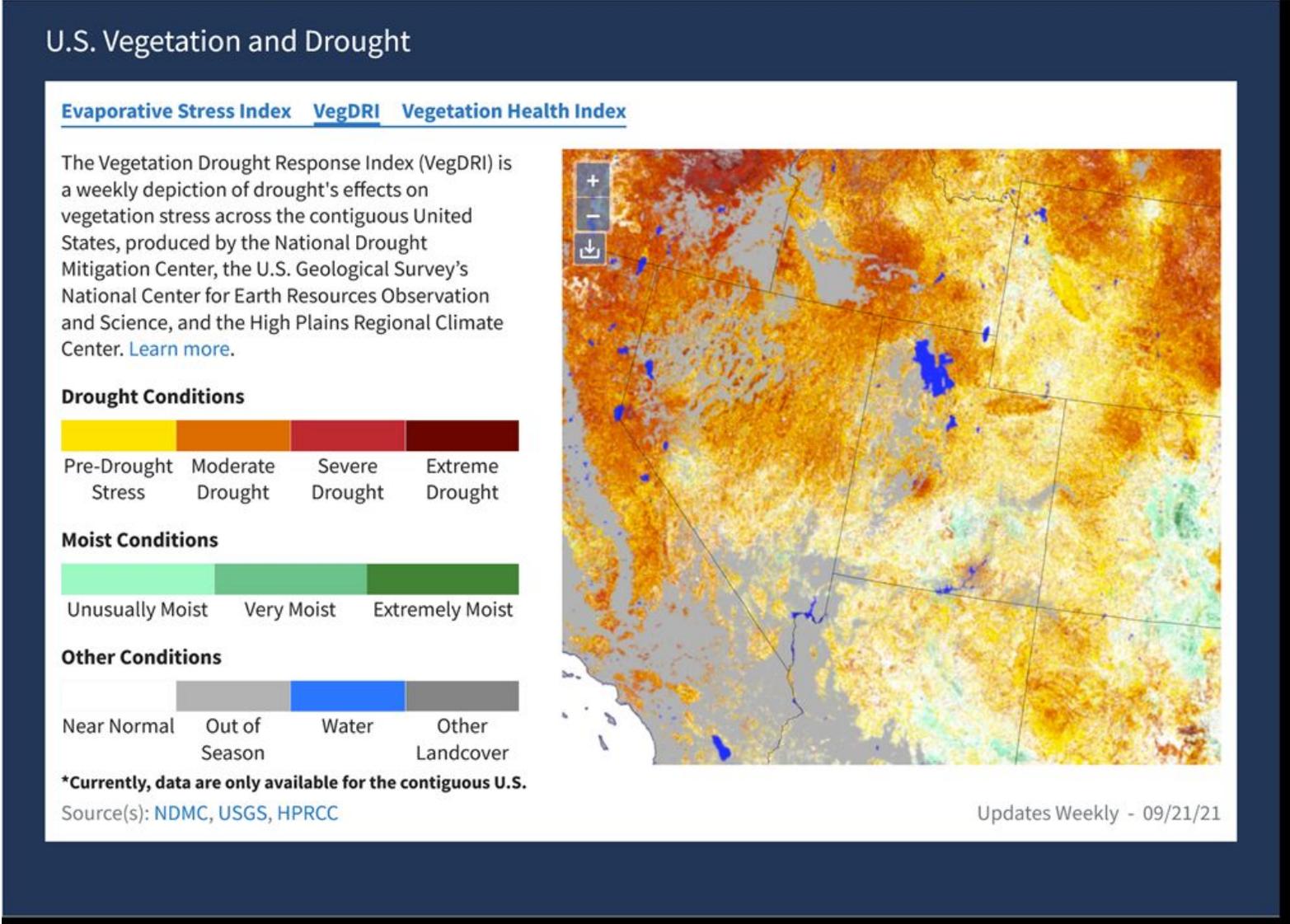
NASA Modeled Soil Moisture changes

1-Month Difference in Column Relative Soil Moisture (%) valid 12z 21 Sep 2021

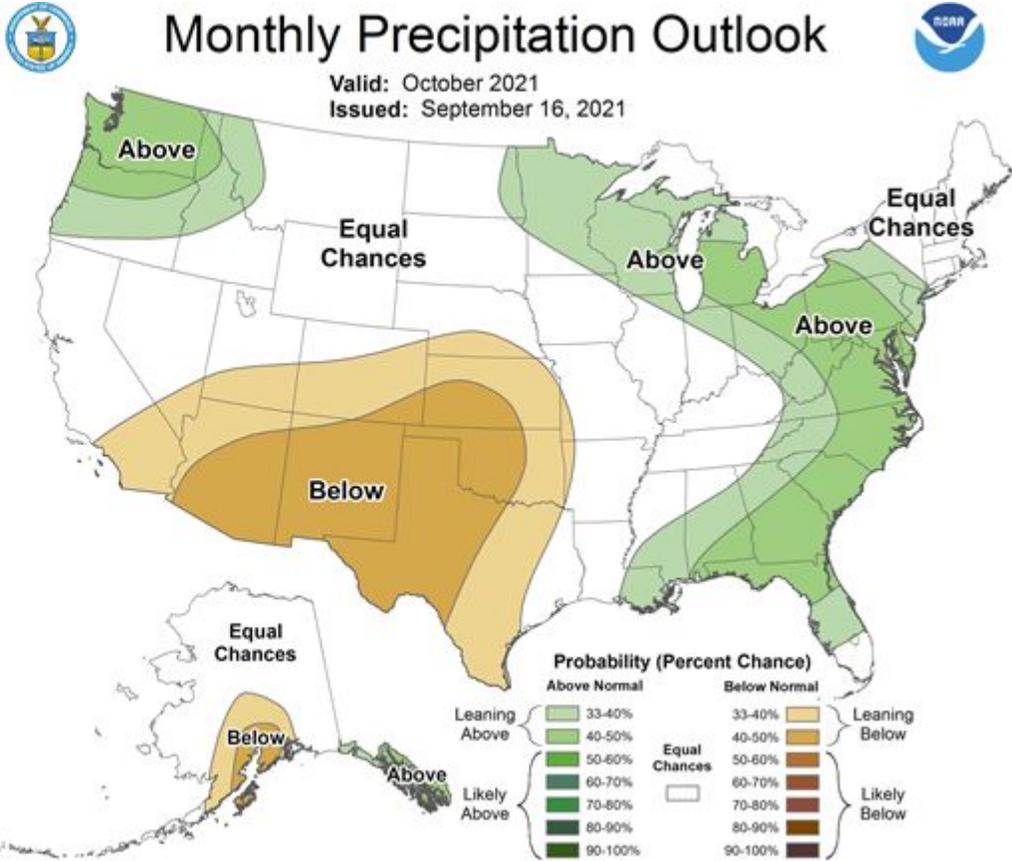
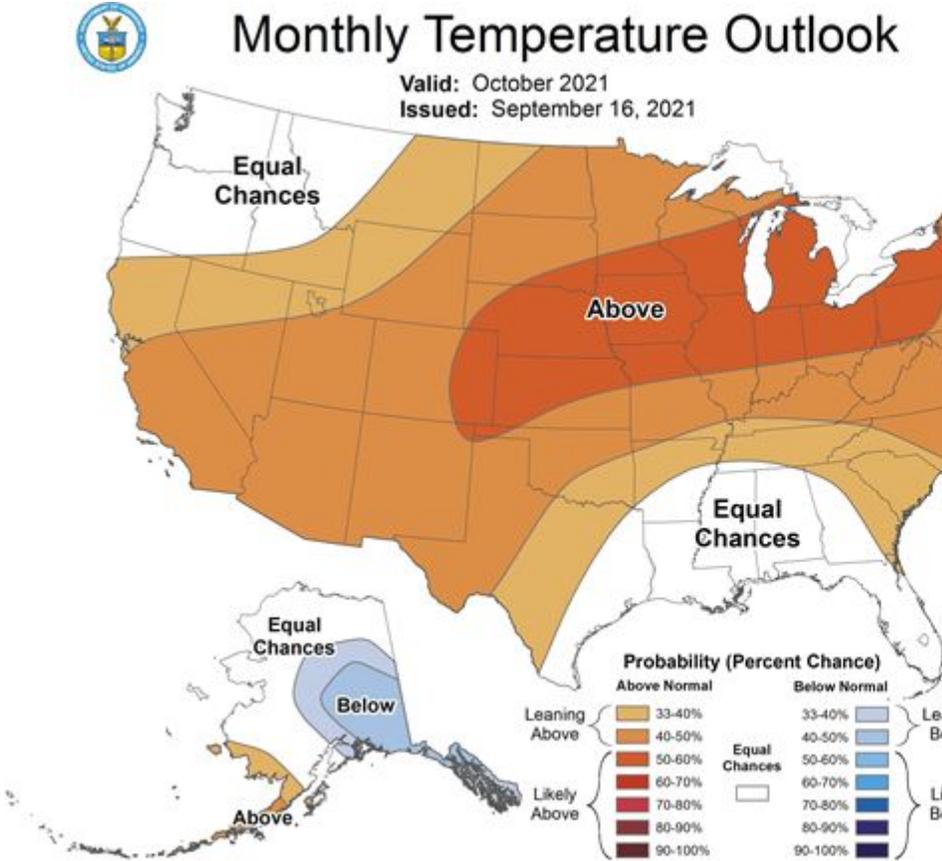


Agency - Utah Climate Center
Presenter - Jon Meyer

Vegetation Drought Response Index (VegDRI)



CPC 1-month outlooks

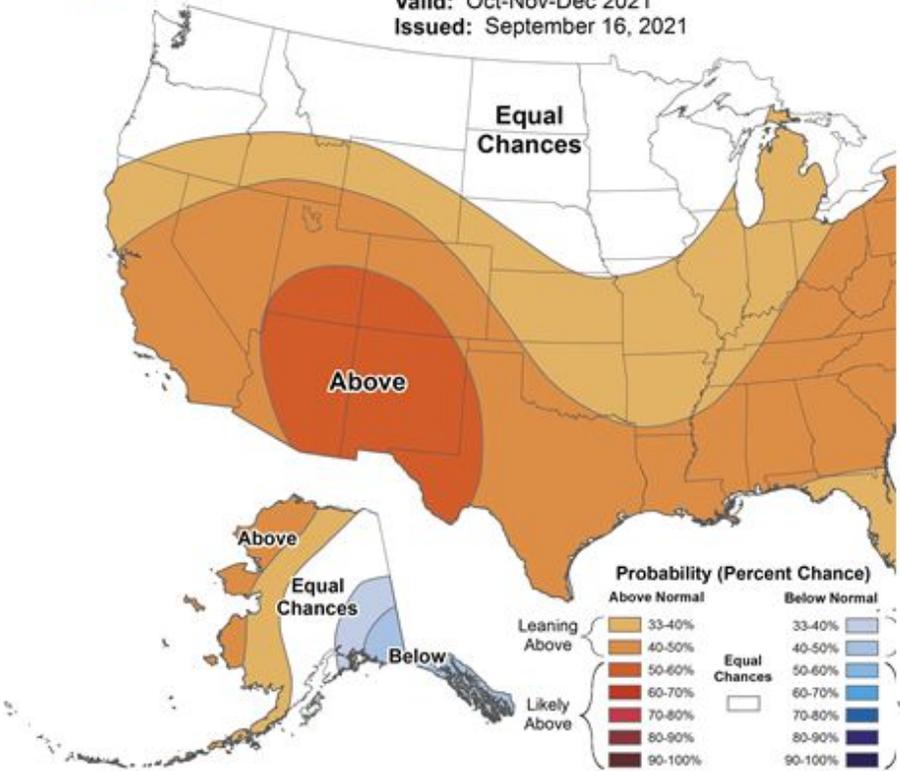


CPC Oct-Dec Outlooks



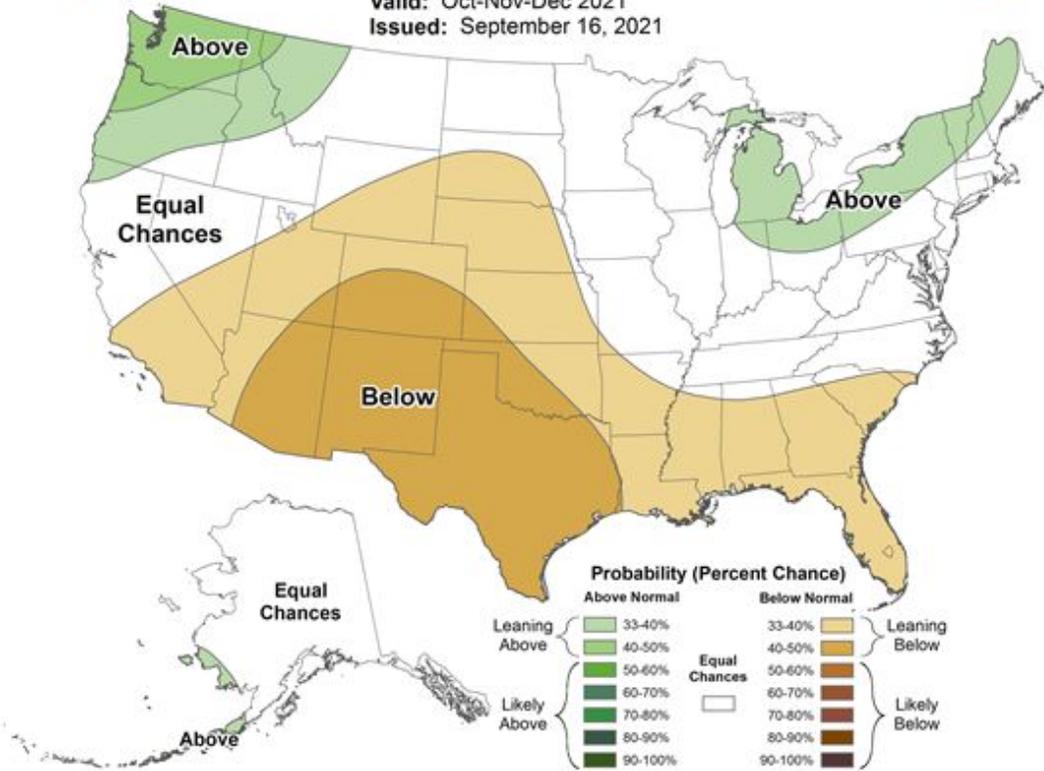
Seasonal Temperature Outlook

Valid: Oct-Nov-Dec 2021
 Issued: September 16, 2021

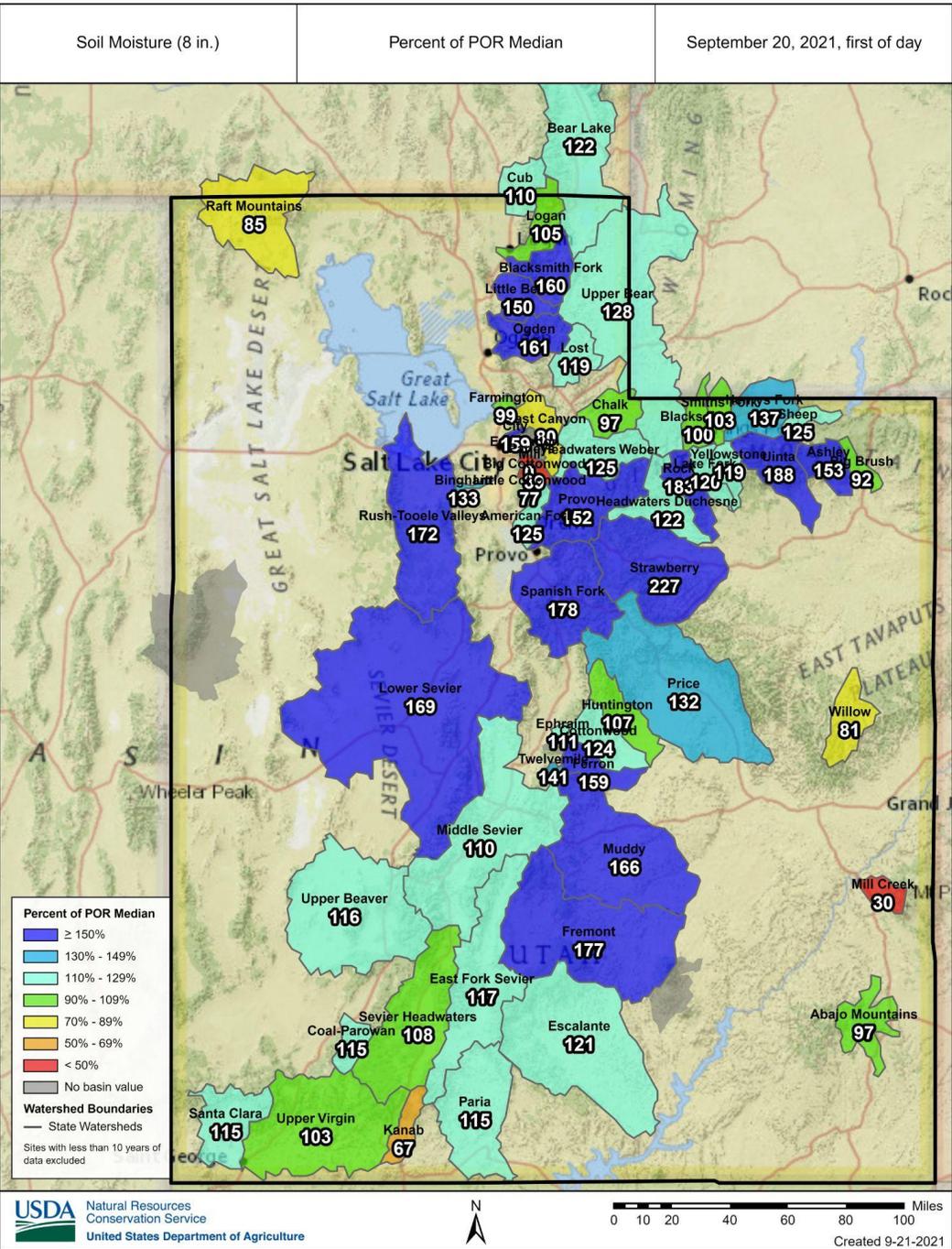


Seasonal Precipitation Outlook

Valid: Oct-Nov-Dec 2021
 Issued: September 16, 2021



Soil Moisture

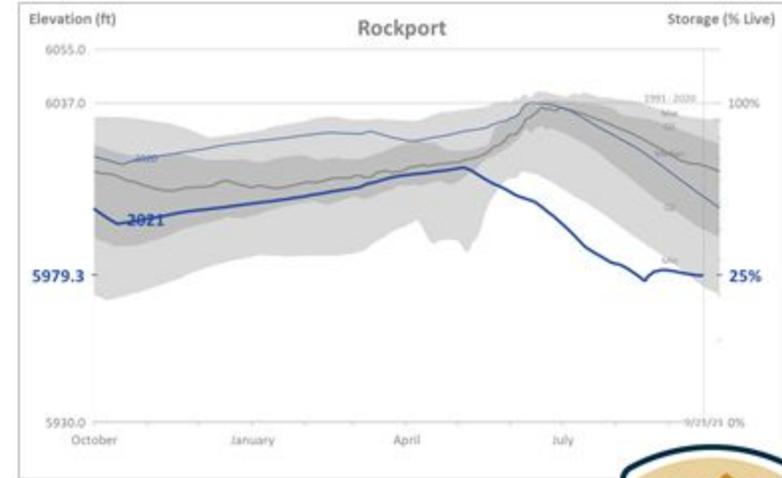
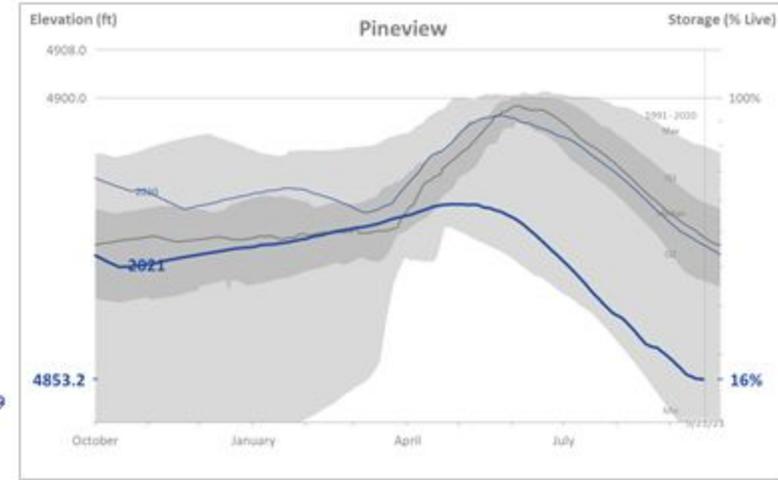
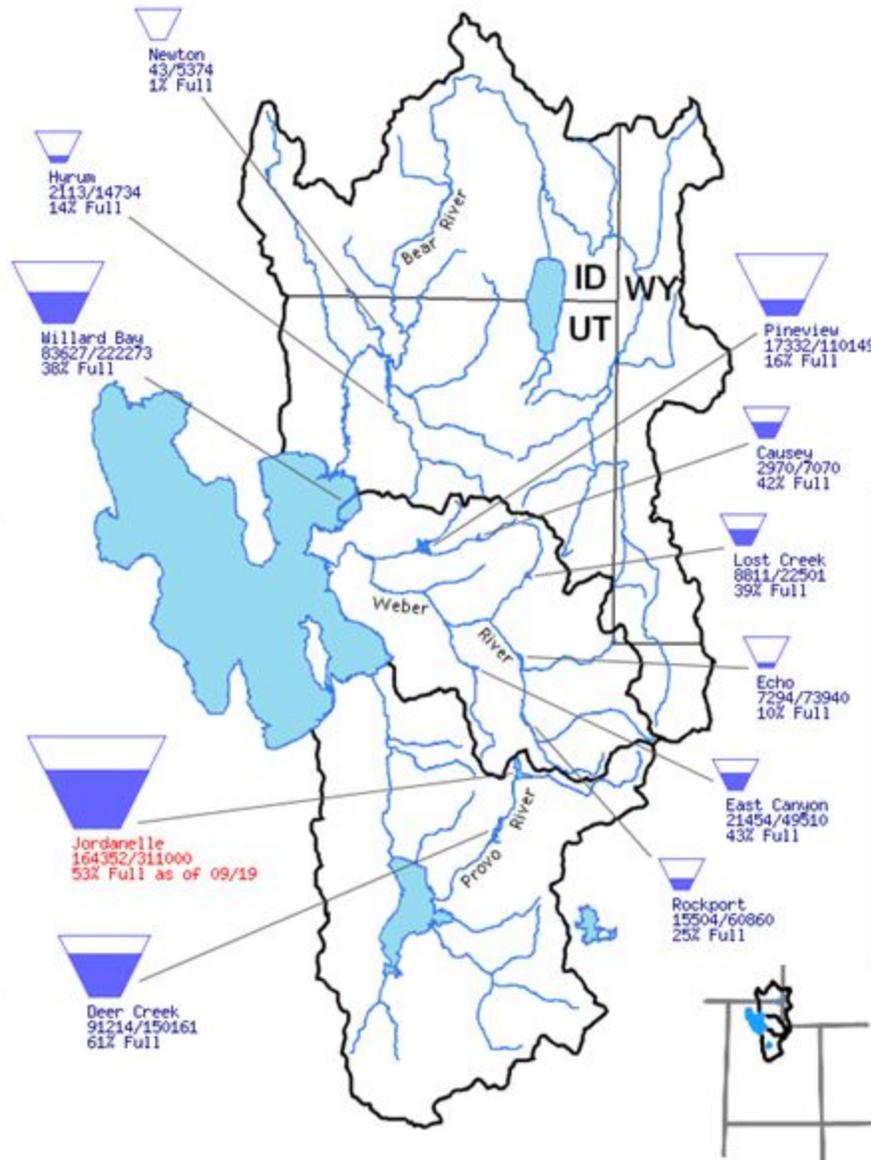
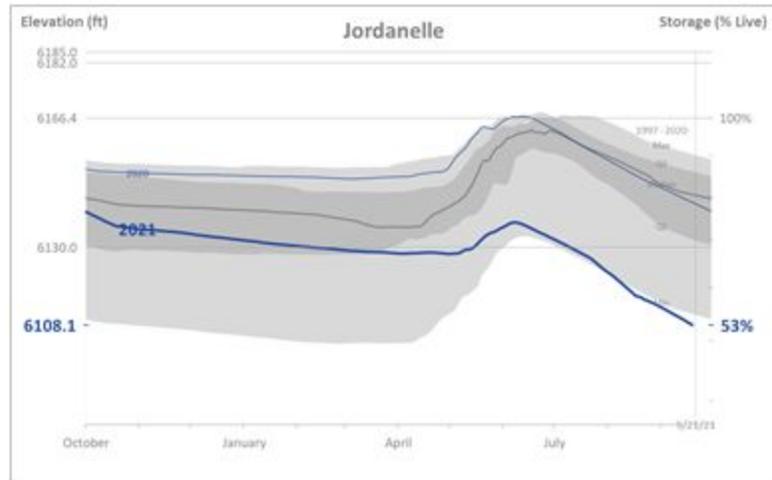
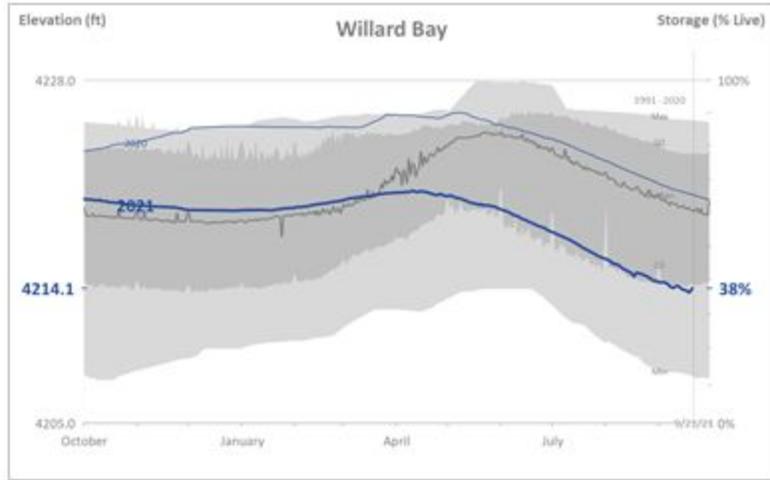


Agency - NRCS
 Presenter - DWRe for NRCS

Reservoir Storage – Great Basin

Data Current as of:
09/28/2021

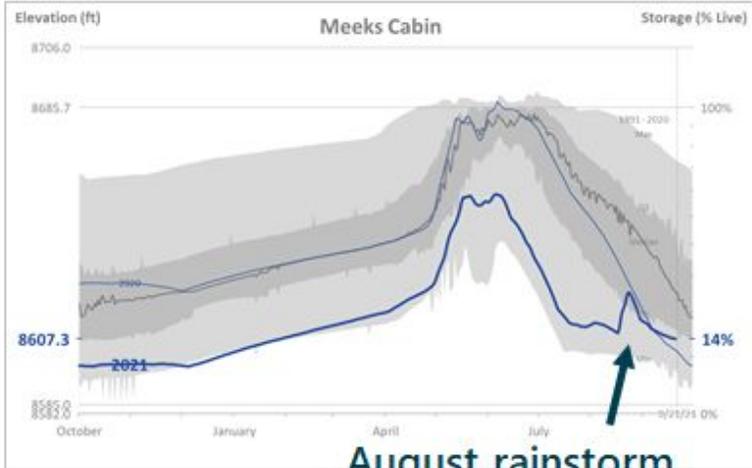
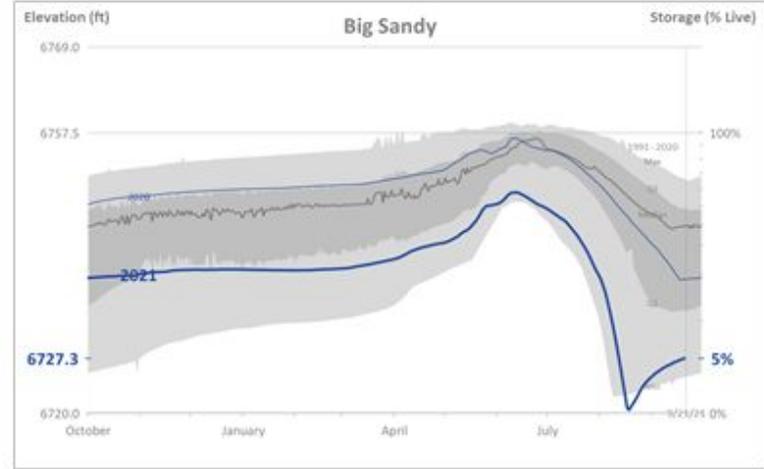
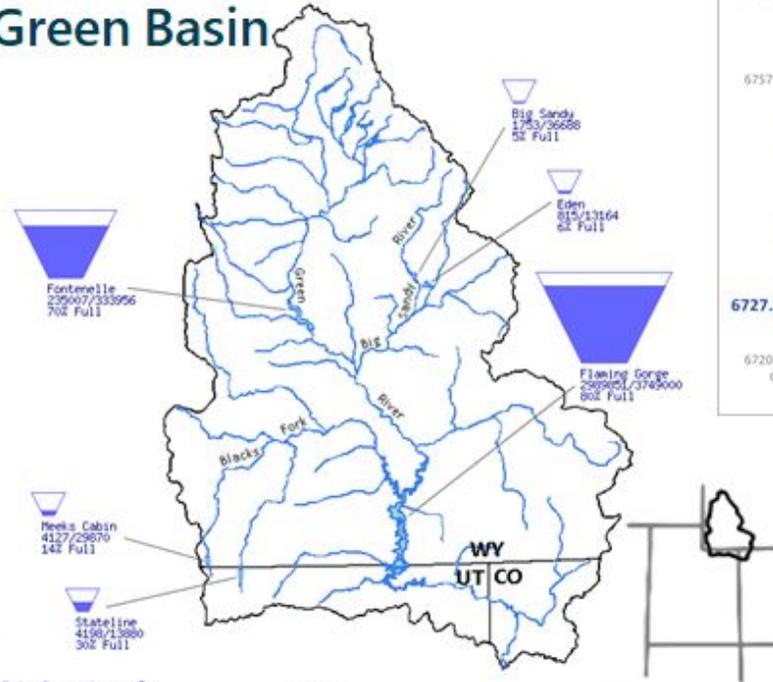
Bear, Weber, and Provo River Basins



Reservoir Storage – Green Basin

Data Current as of:
09/28/2021

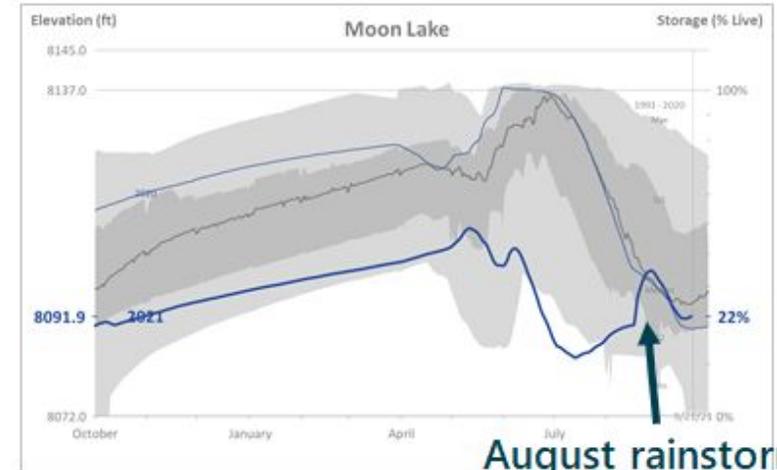
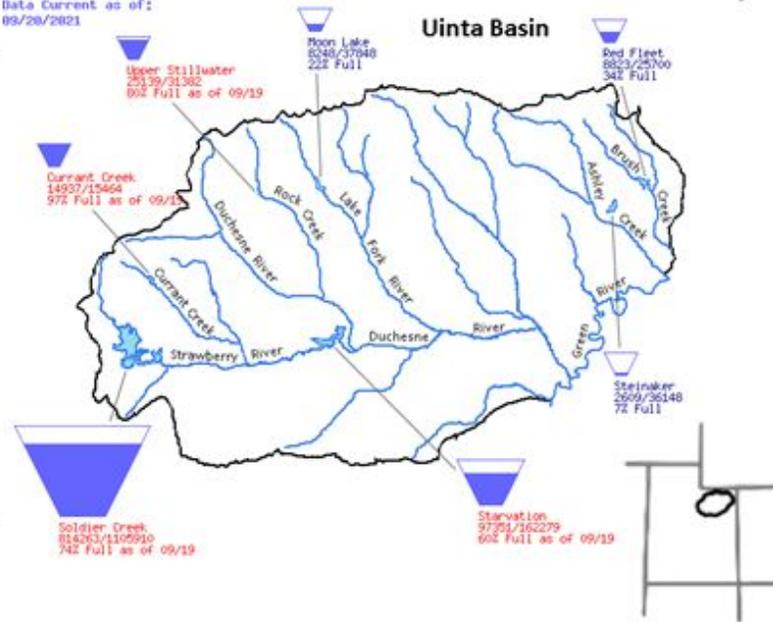
Upper Green River Basin



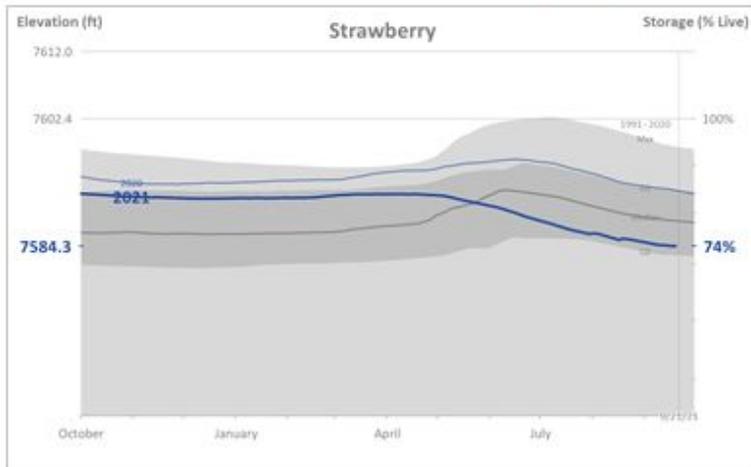
**August rainstorm
+ ~6,000 acre-feet
(~20% of capacity)**

Data Current as of:
09/28/2021

Uinta Basin



**August rainstorm
+ ~6,000 acre-feet
(~16% of capacity)**



Data Current as of:
09/28/2021

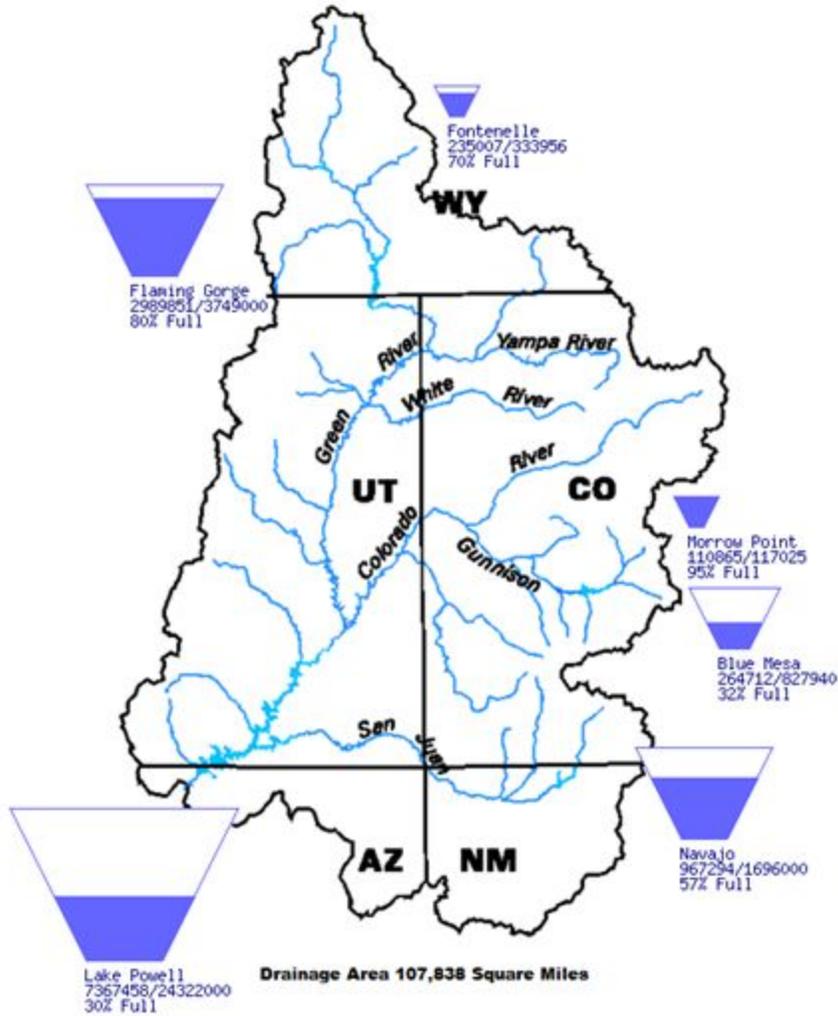
Price and San Rafael River Basins



Reservoir Storage – Lake Powell

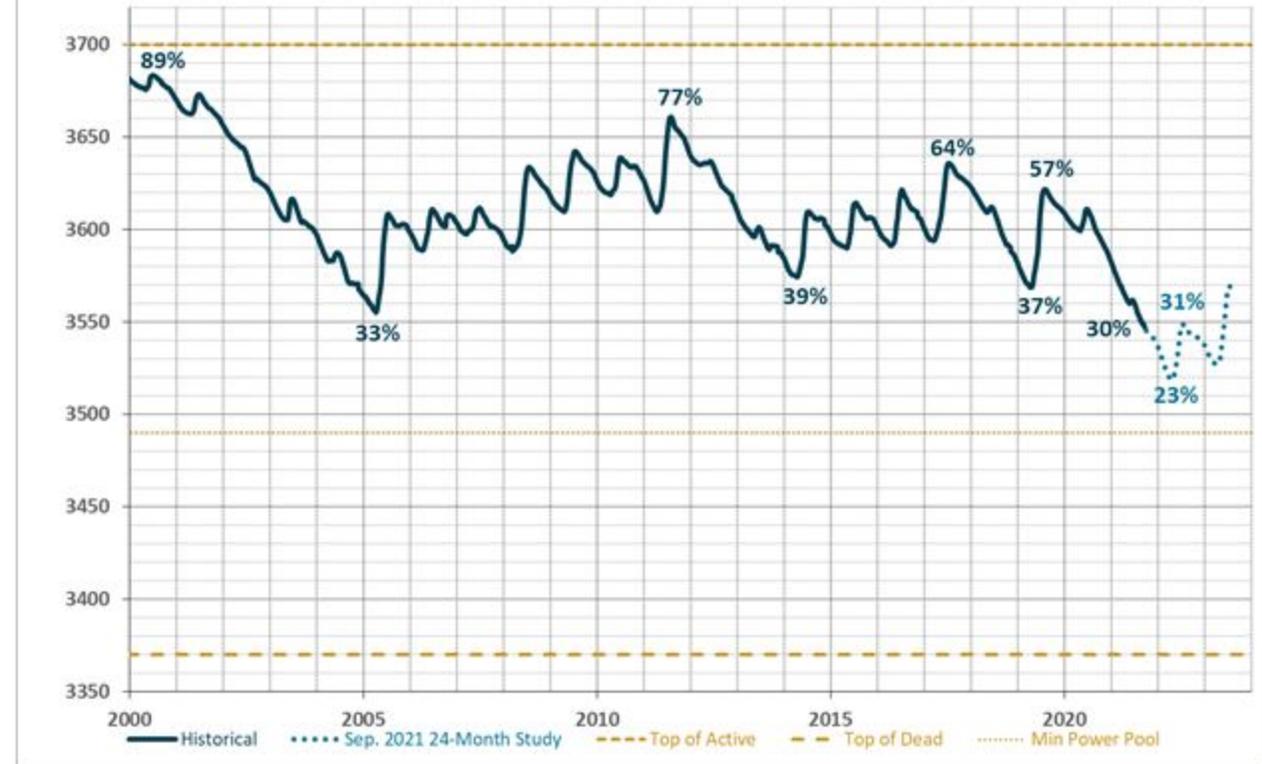
Data Current as of:
09/28/2021

Upper Colorado River Drainage Basin



Lake Powell

Elevation in feet



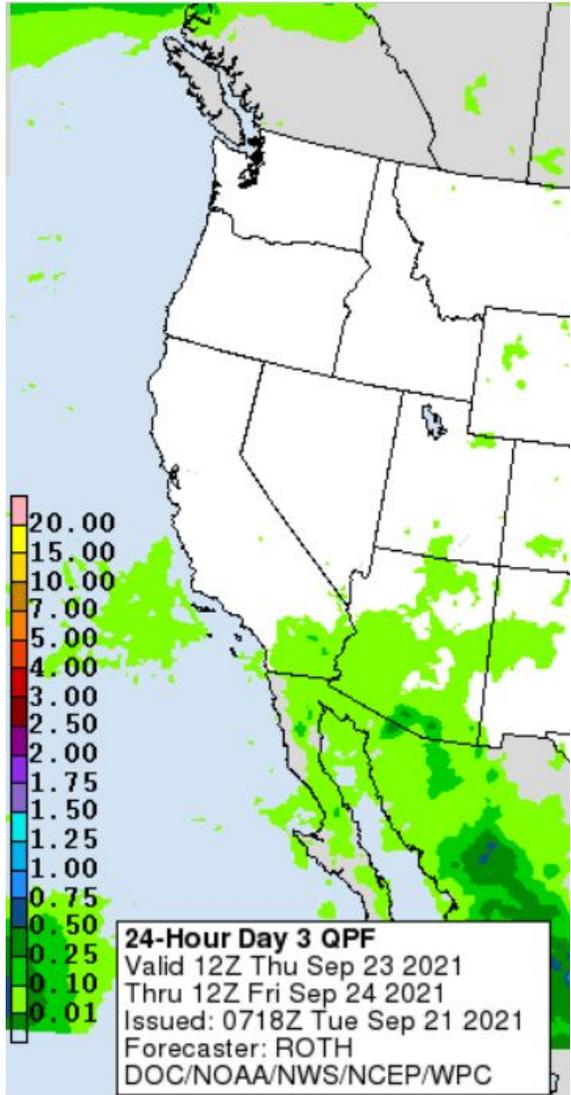
Consistent with the Upper Basin Drought Response Operations Agreement (DROA) provisions to protect a target elevation at Lake Powell of 3,525 feet, this September 2021 24-Month Study includes releases from the upstream initial units of the Colorado River Storage Project Act to deliver an additional 181 thousand acre-feet (kaf) to Lake Powell by the end of December 2021. The additional releases began in July and will continue to be implemented on the following schedule:

	Jul (kaf)	Aug (kaf)	Sep (kaf)	Oct (kaf)	Nov (kaf)	Dec (kaf)	Total (kaf)
Flaming Gorge Reservoir	13	42	43	27	0	0	125
Blue Mesa Reservoir	0	14	18	4	0	0	36
Navajo Reservoir	0	0	0	0	10	10	20
Total (kaf)	13	56	61	31	10	10	181

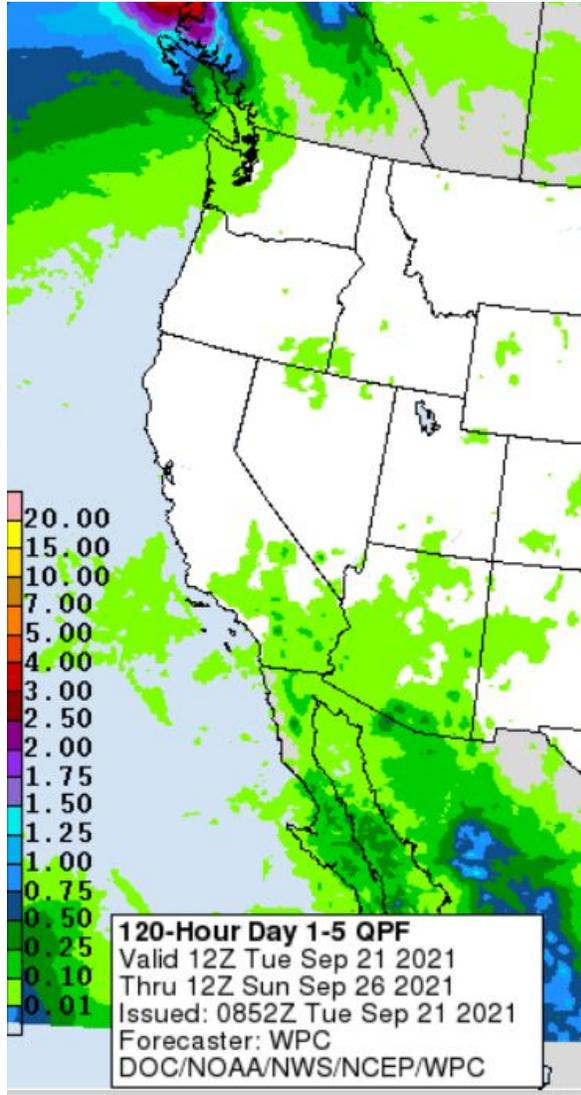
Agency - USBR Provo Area Office
Presenter - Gary Henrie



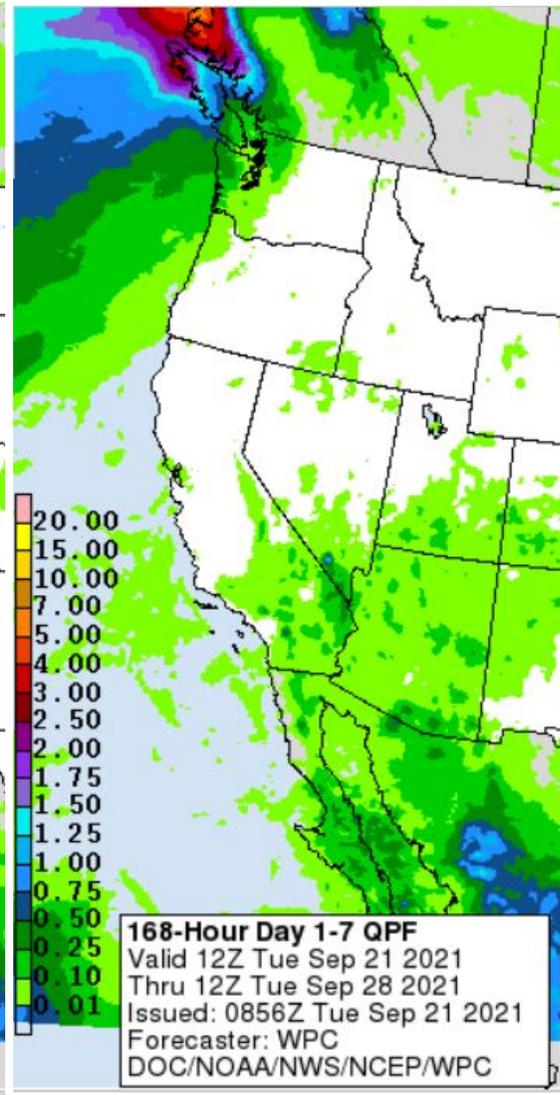
Weather Forecast Office Utah Day 1-7 Outlook



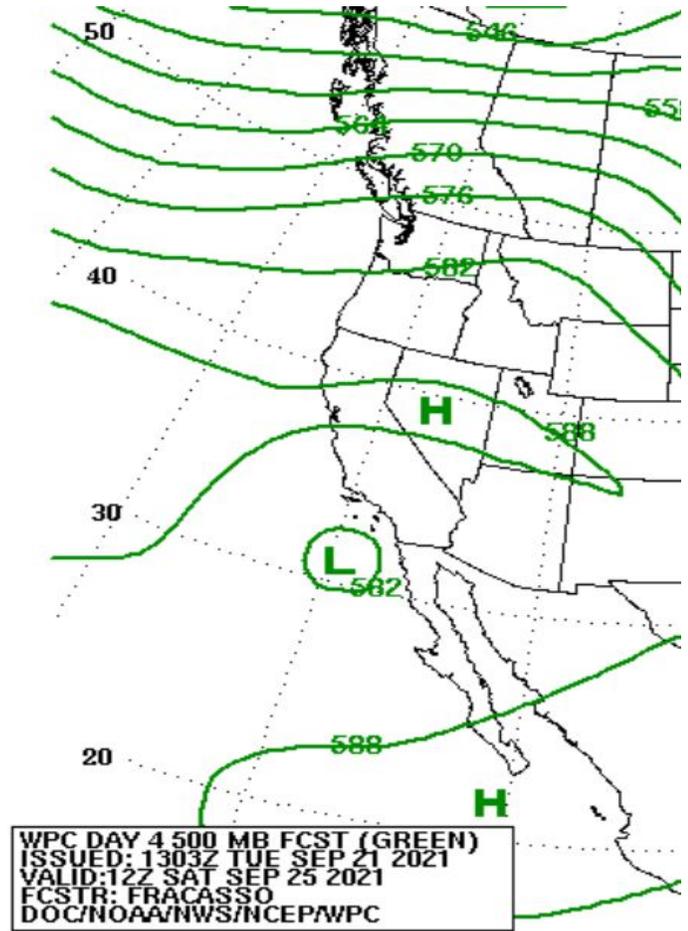
Thursday - Friday



Tuesday - Sunday



Tuesday - Tuesday



Saturday Morning

Agency - National Weather Service Weather Forecast Office

Presenter - Aldis Strautins

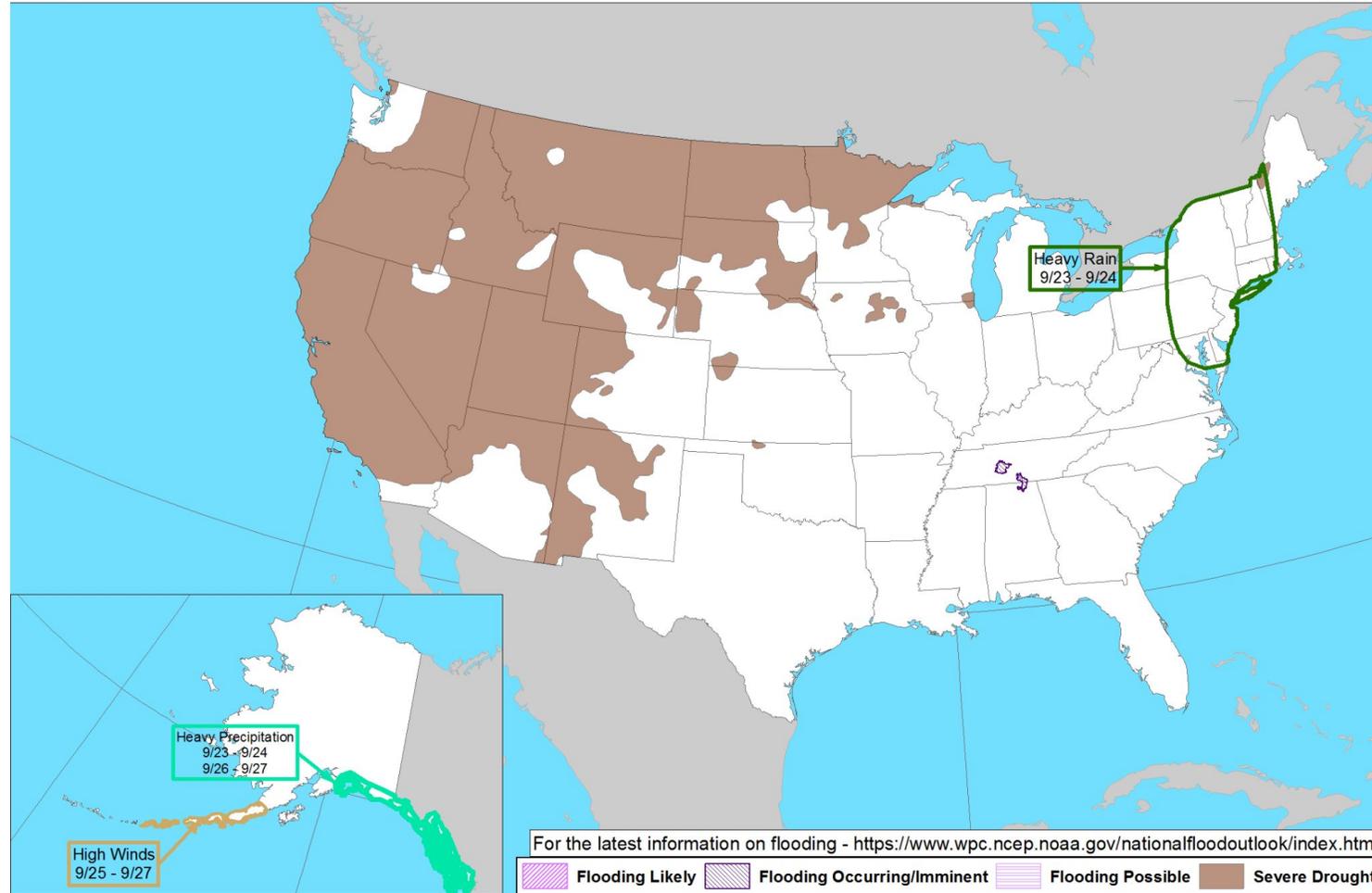
Weather Prediction Center U.S. Day 3-7 Hazards Outlook



Day 3-7 U.S. Hazards Outlook
Valid: 09/23/2021-09/27/2021



Drought conditions persist



Weather Prediction Center

Made: 09/20/2021 3PM EDT

Follow us:

www.wpc.ncep.noaa.gov

Agency - National Weather Service Weather Forecast Office

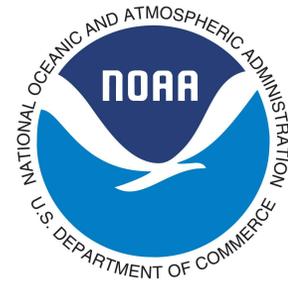
Presenter - Aldis Strautins

Climate Prediction Center 8 to 14 Day Outlooks - Temperature



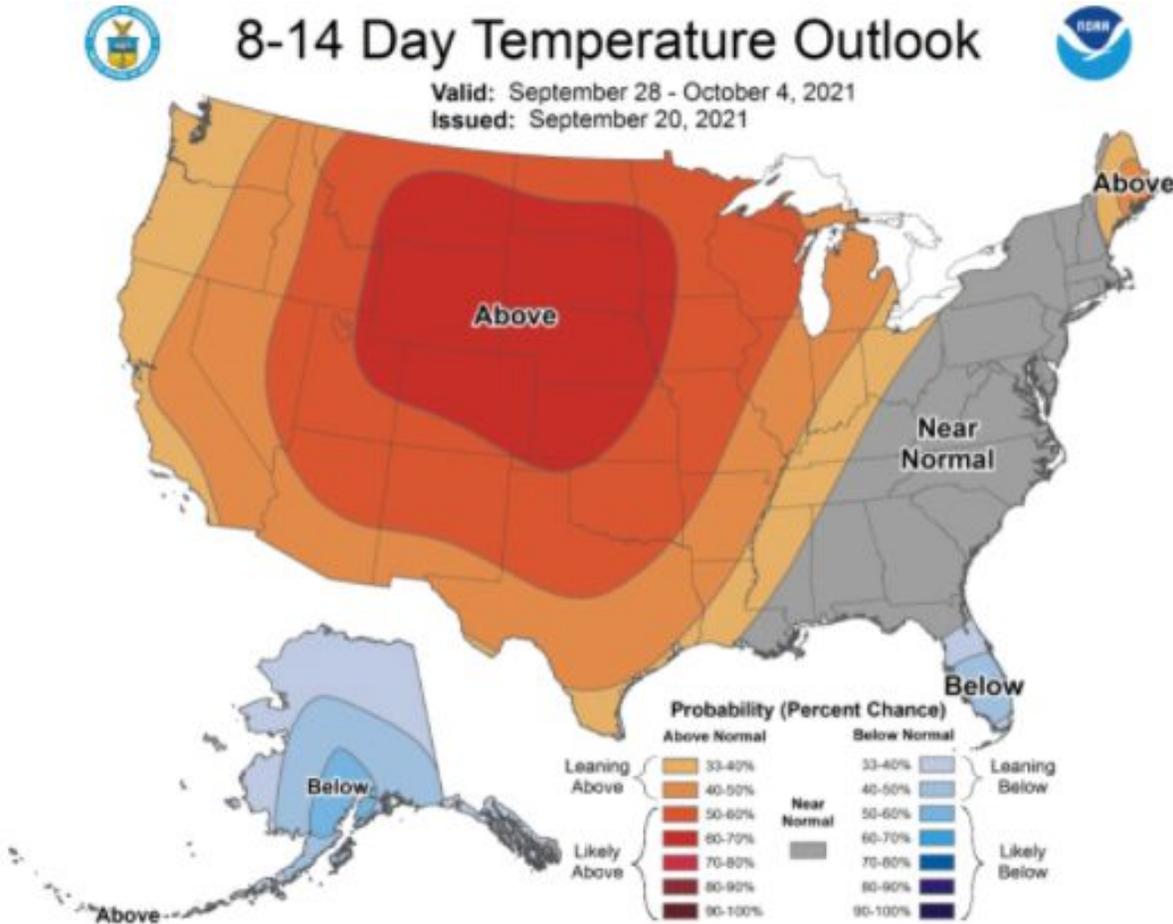
Agency - National Weather Service Weather Forecast Office
Presenter -

Climate Prediction Center 8 to 14 Day Outlooks - Temperature and Precipitation



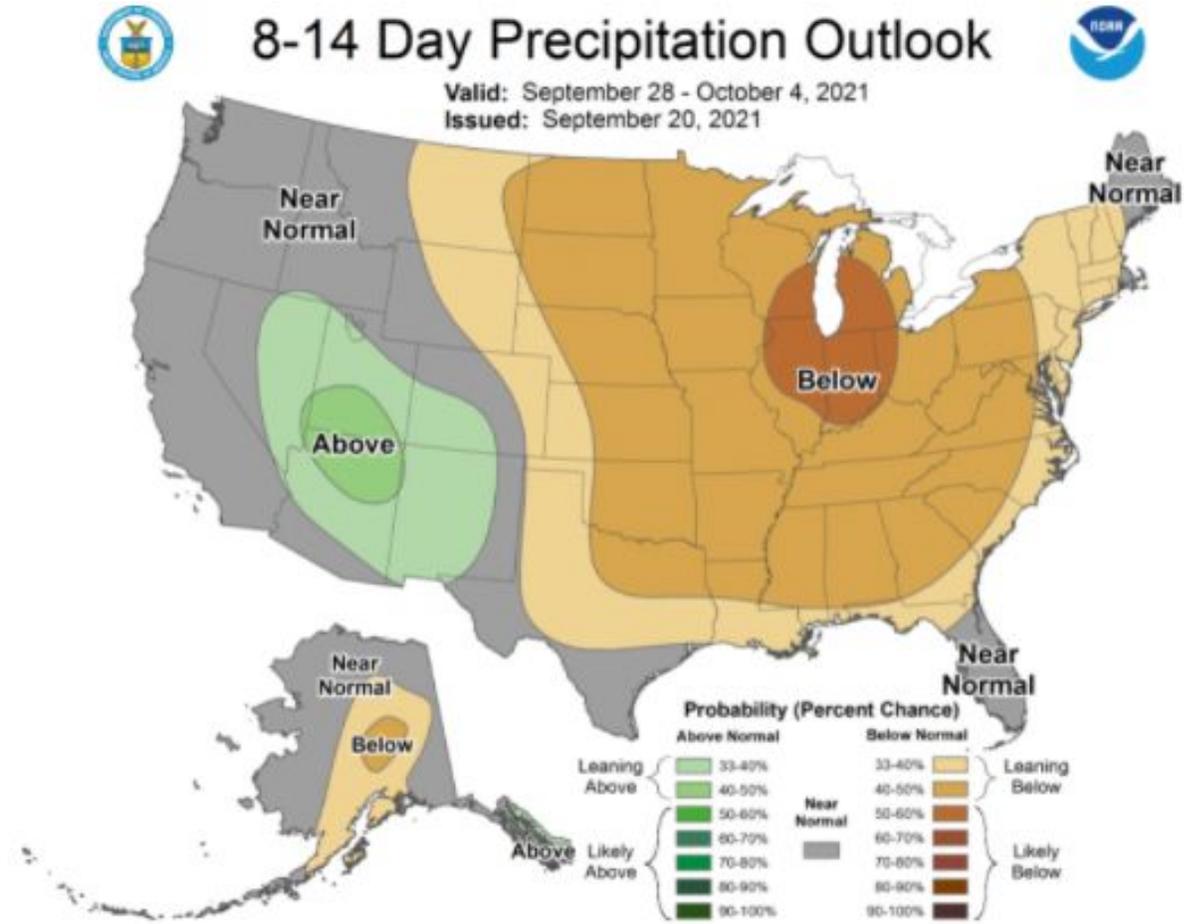
8-14 Day Temperature Outlook

Valid: September 28 - October 4, 2021
Issued: September 20, 2021

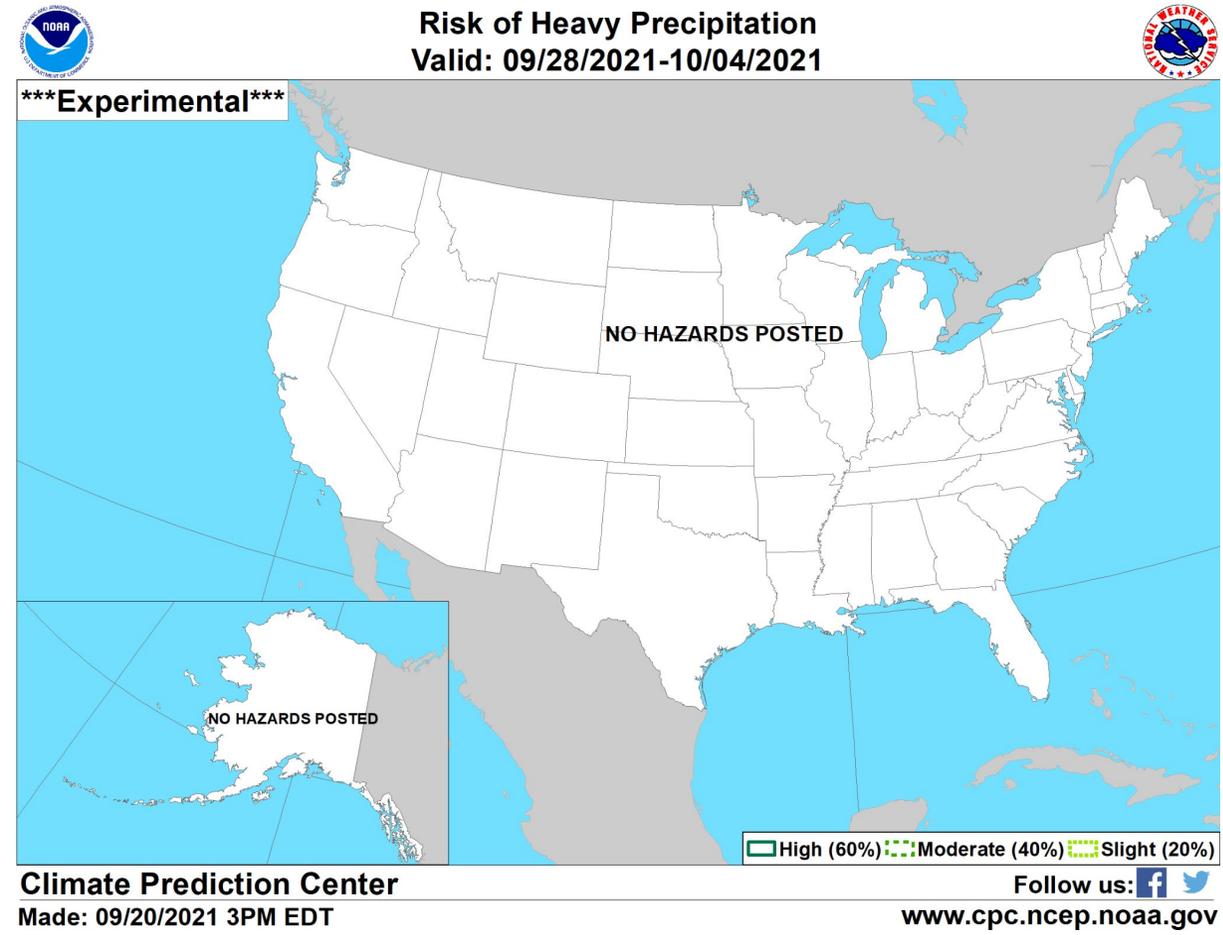
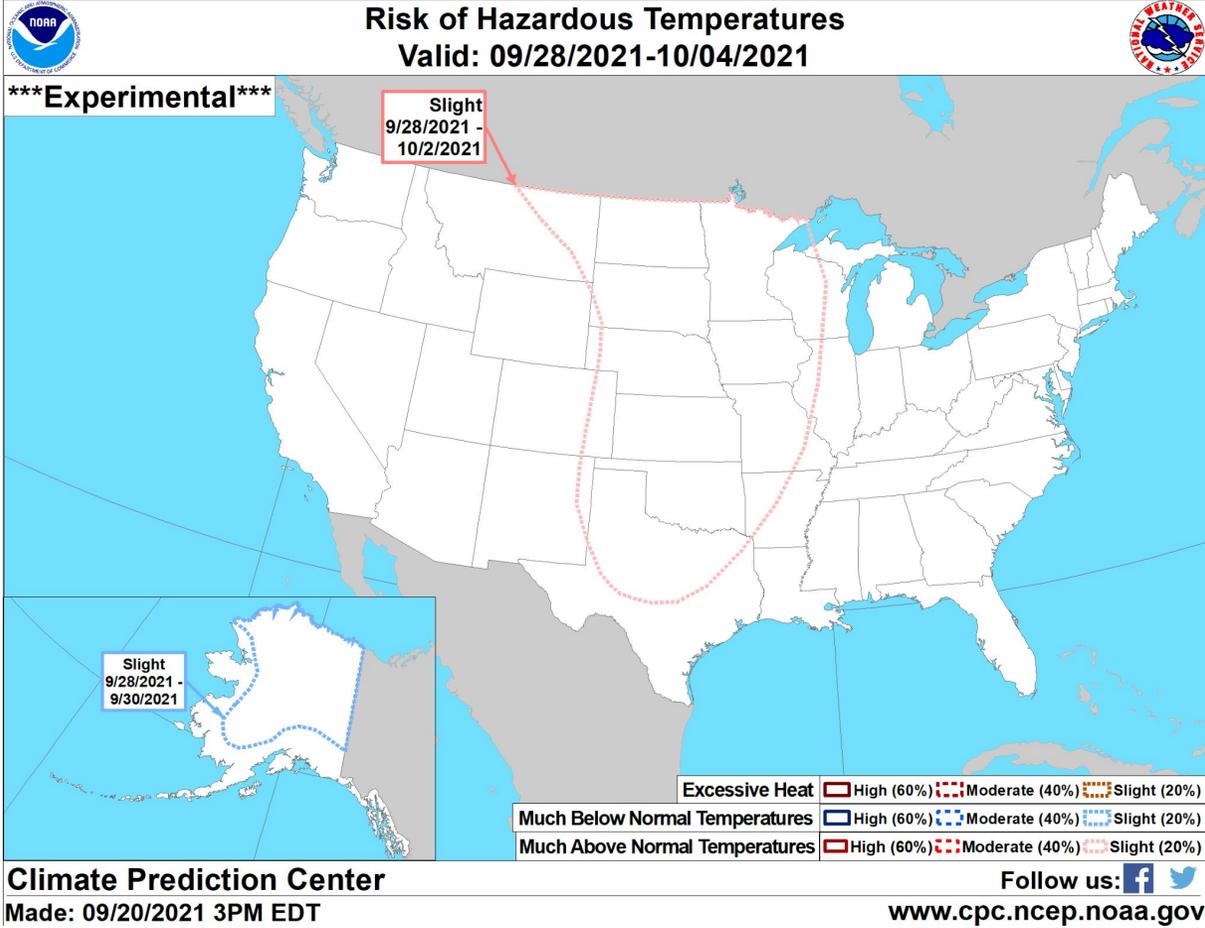


8-14 Day Precipitation Outlook

Valid: September 28 - October 4, 2021
Issued: September 20, 2021

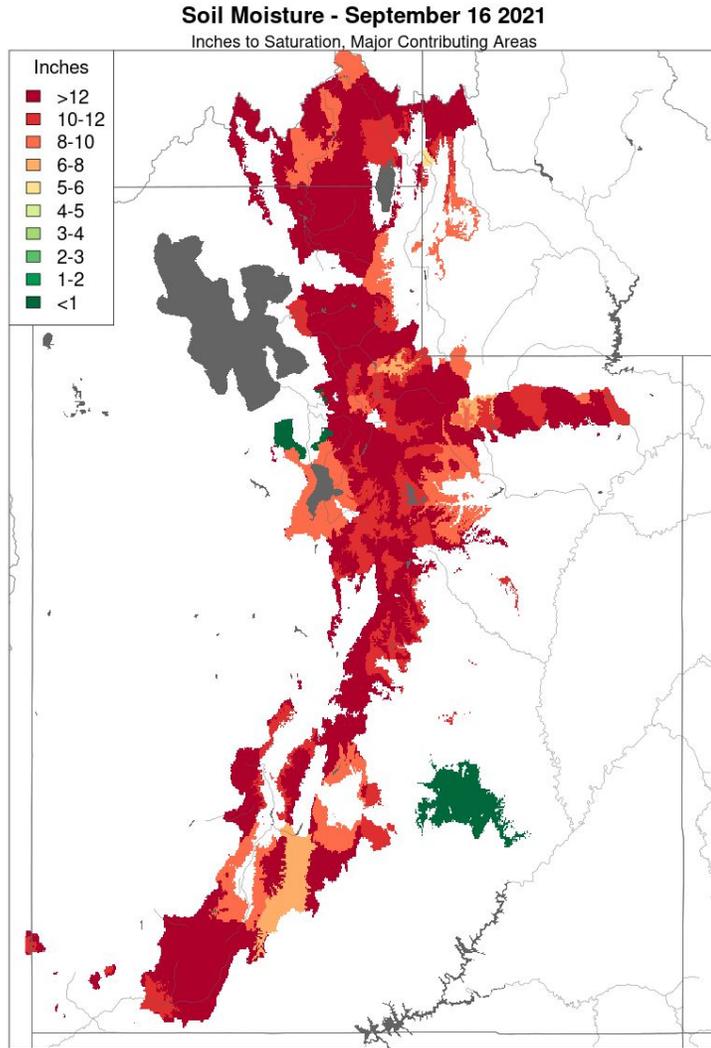


Climate Prediction Center U.S. Week-2 Hazards Outlook



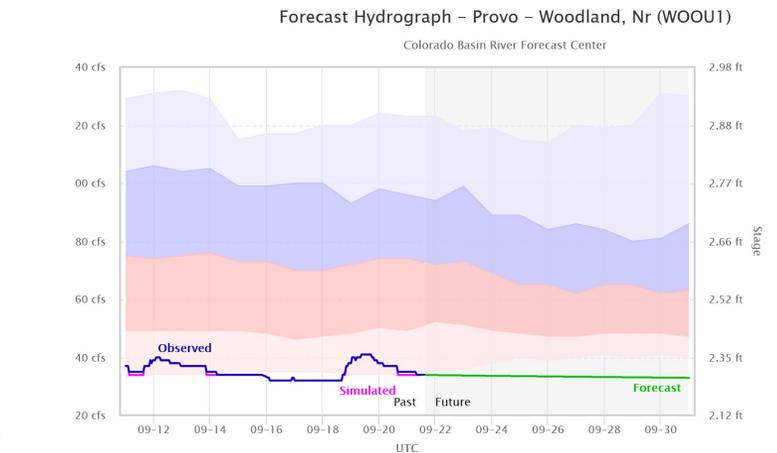
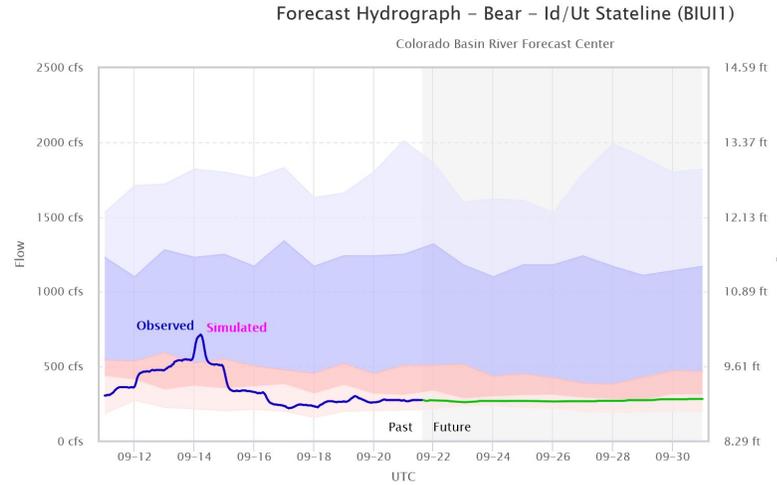
Agency - National Weather Service Weather Forecast Office
Presenter - Aldis Strautins

Base Flow Conditions / Modeled Soil Moisture and YTD Precipitation



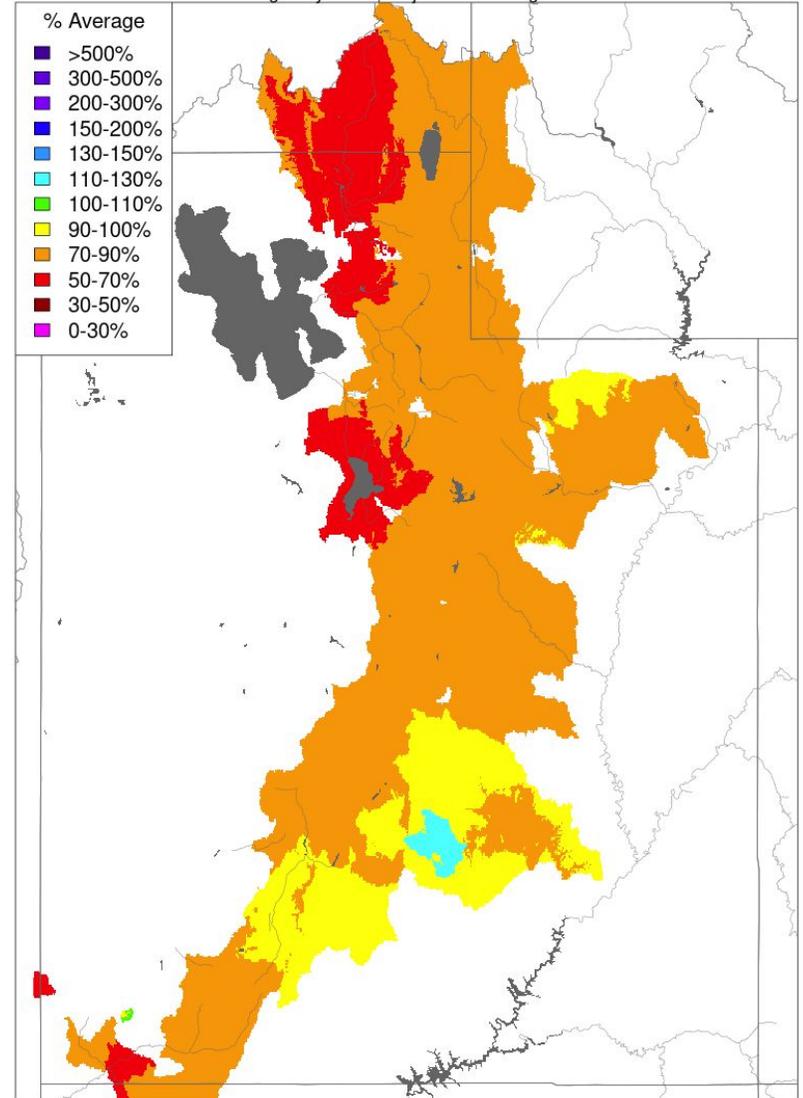
Prepared by NOAA, Colorado Basin River Forecast Center
Salt Lake City, Utah, www.cbrfc.noaa.gov

Unregulated 90-75th Percentile flows Across Utah



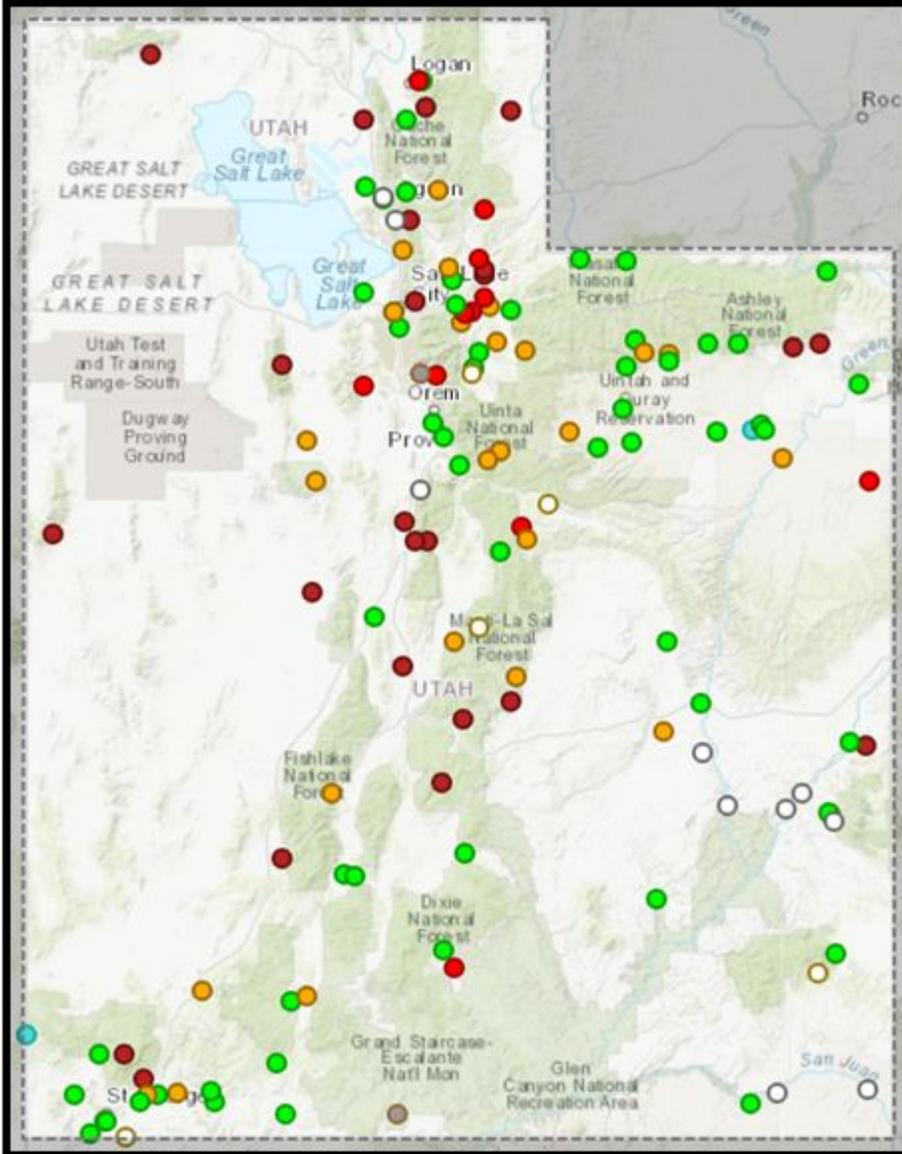
Seasonal to Date Precipitation, October 01 - September 21 2021

Averaged by Basin, Major Contributing Areas

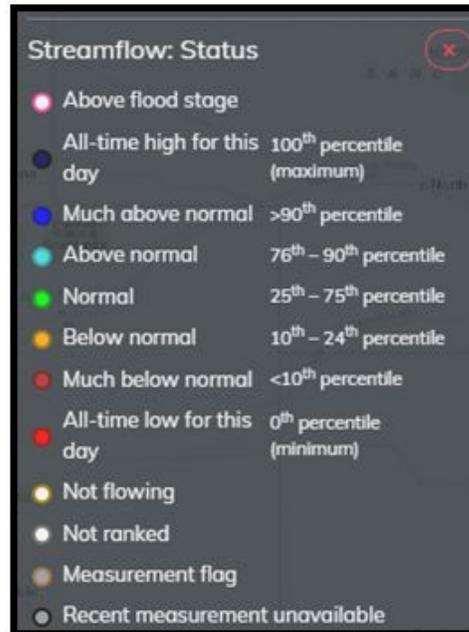


Prepared by NOAA, Colorado Basin River Forecast Center
Salt Lake City, Utah, www.cbrfc.noaa.gov

Current Streamflow Conditions

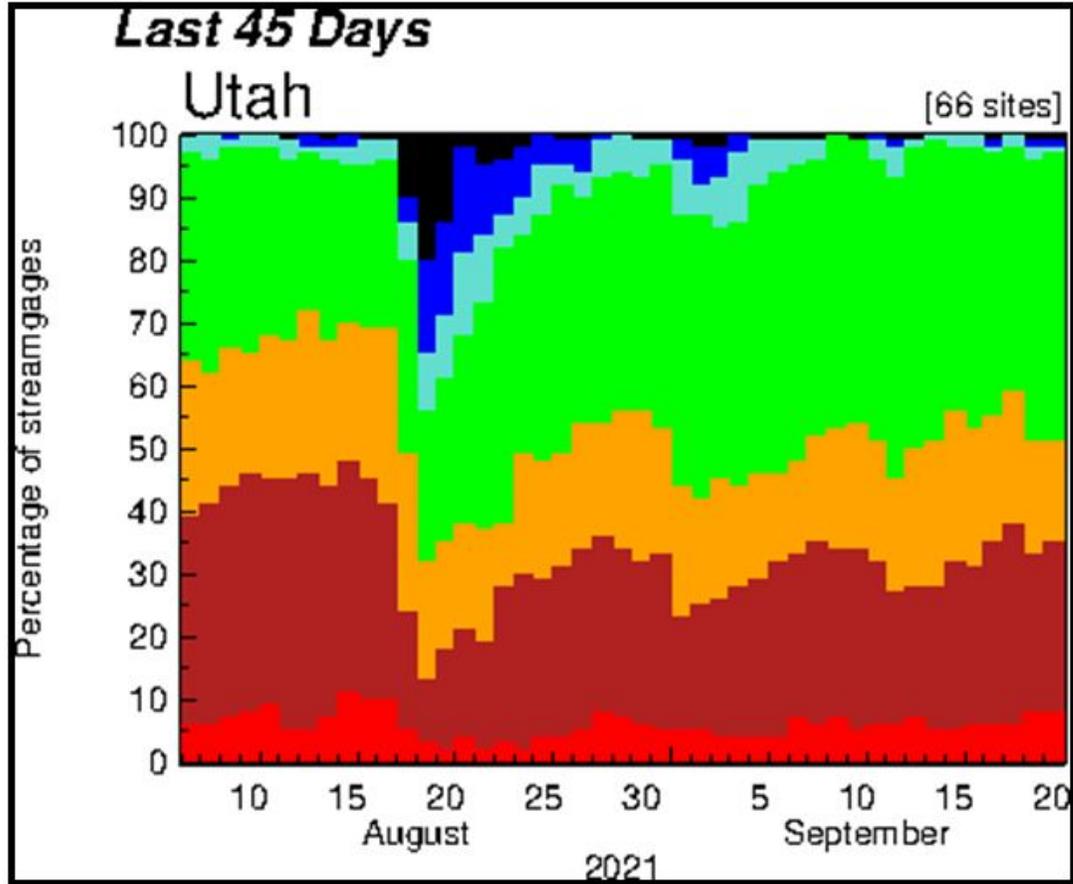


Day-of-Year Status	# Gages	% Gages
All-time high for this day-of-year	0	0.0%
Much above normal for this day-of-year	0	0.0%
Above normal for this day-of-year	2	1.5%
Normal for this day-of-year	57	41.6%
Below normal for this day-of-year	26	19.0%
Much below normal for this day-of-year	24	17.5%
All-time low for this day-of-year	1	8.0%
Not ranked - insufficient record	10	7.3%
Not ranked - stream not flowing	5	3.6%



Sites must have at least 10 years of record to be included in this graphic

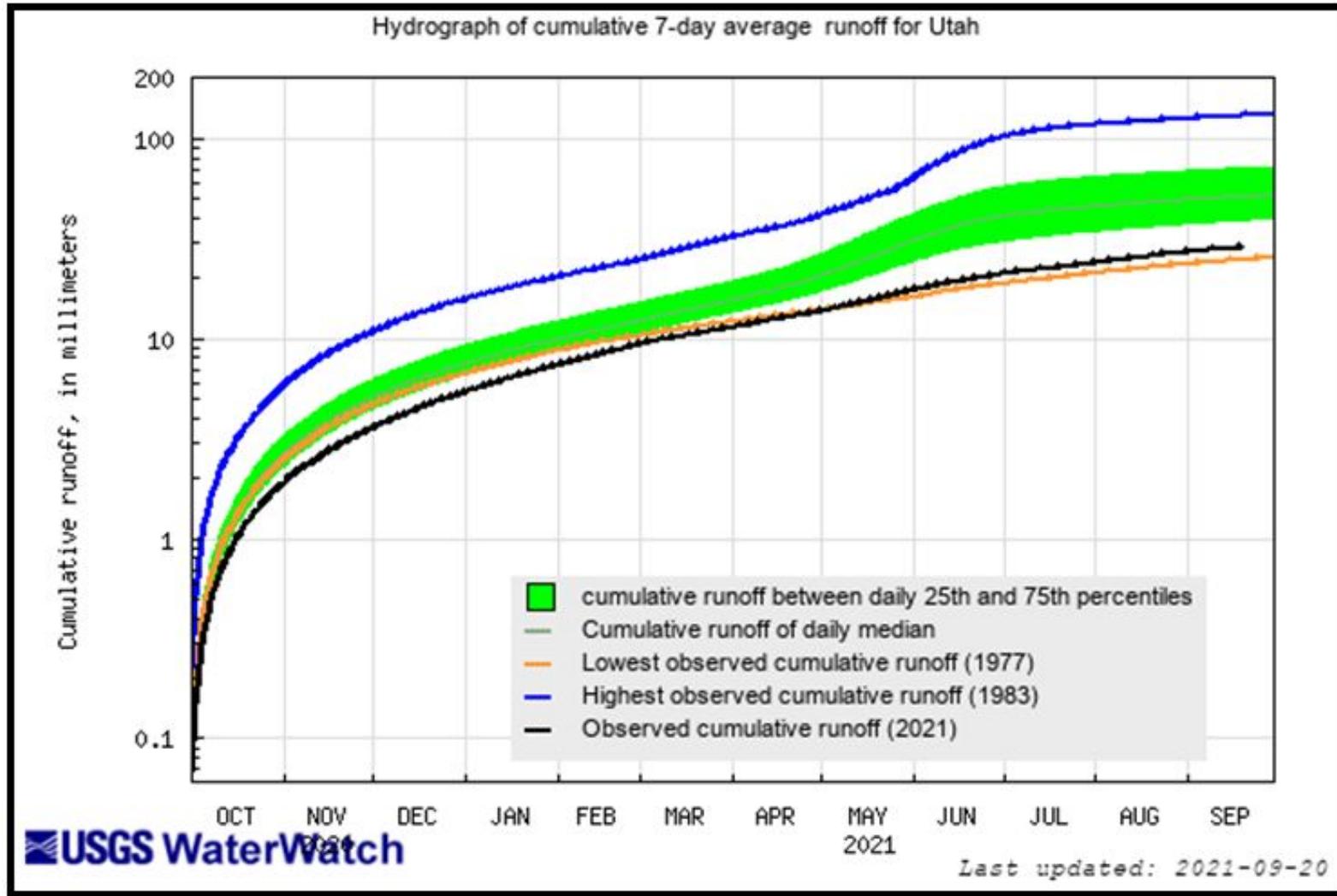
Current Streamflow Conditions



- Mean daily Streamflow compared to historical streamflow for the day of the year
- Sites must have at least 30 years of record to be included in this graphic

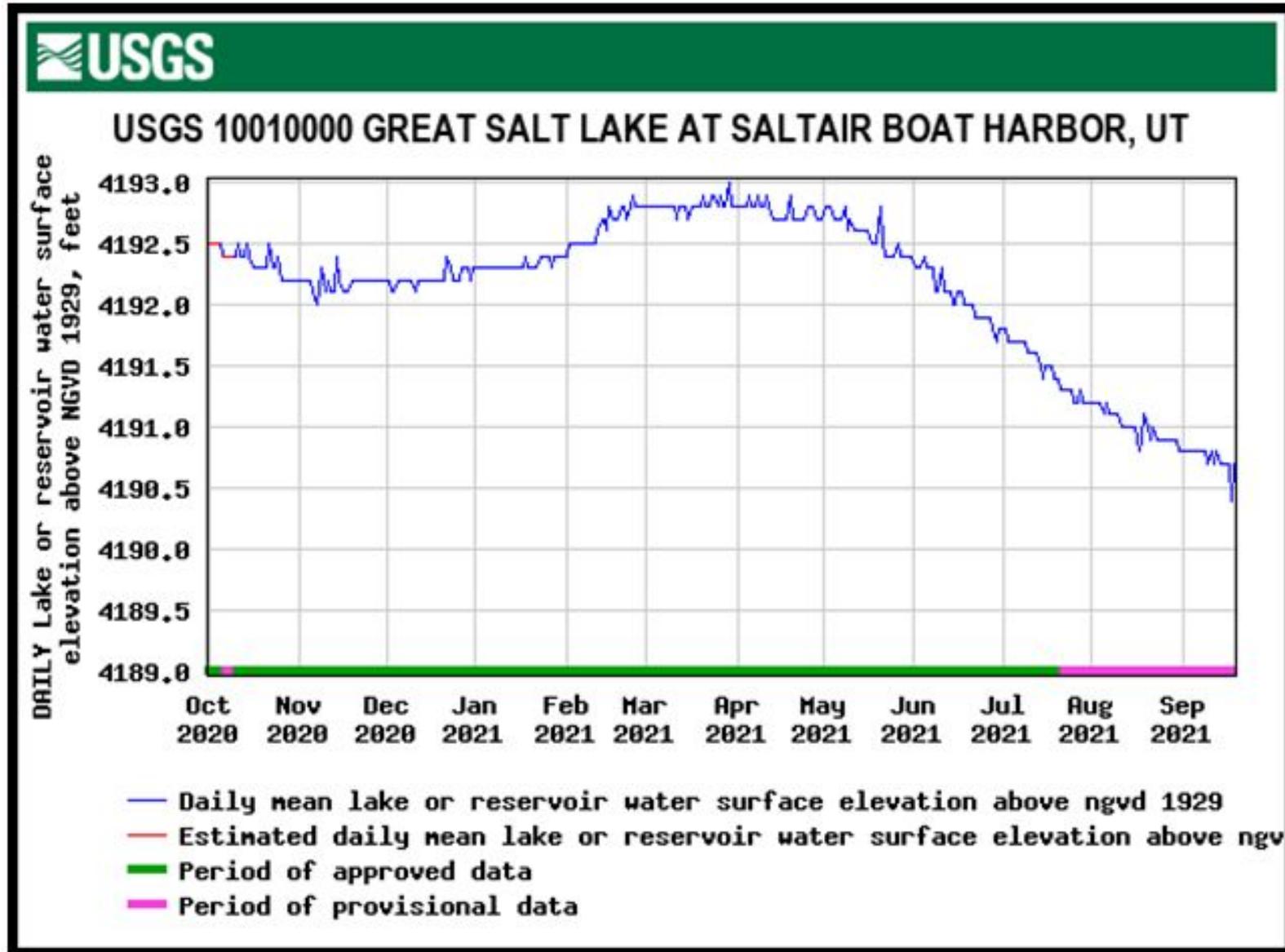
Explanation - Percentile classes								
Low	<10	10-24	25-75	76-90	>90	High	No Data	
	Much below normal	Below normal	Normal	Above normal	Much above normal			

Cumulative Streamflow



□ Cumulative 7-day average runoff for water year 2021 is near the lowest on record

Great Salt Lake Water Surface Elevation at Saltair

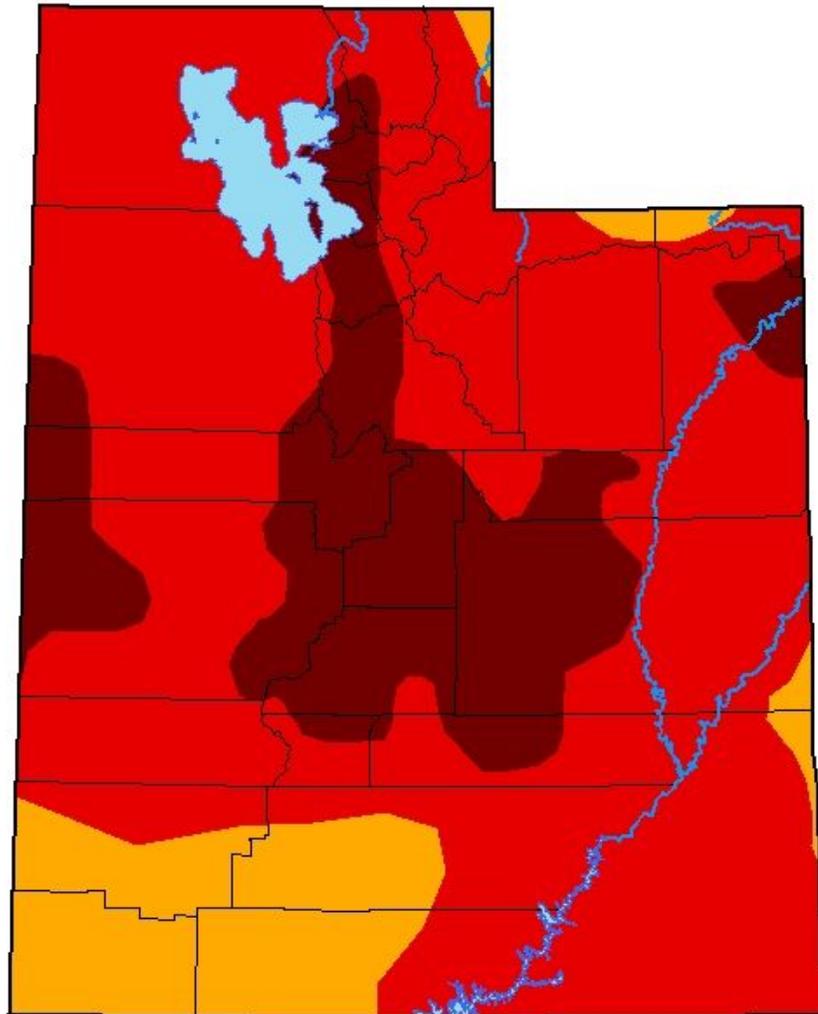


- ❑ Mean daily value 9/20/2021 = 4,190.7'
- ❑ Broke historic low record on 7/21/2021 when daily mean value = 4,191.3'
- ❑ Site has data record dating back to 1847

U.S. Drought Monitor

Utah

September 14, 2021
(Released Thursday, Sep. 16, 2021)
Valid 8 a.m. EDT



Intensity:

-  None
-  D0 Abnormally Dry
-  D1 Moderate Drought
-  D2 Severe Drought
-  D3 Extreme Drought
-  D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

Brad Rippey
U.S. Department of Agriculture



droughtmonitor.unl.edu